



A Public Engagement Summary



As arguably the birthplace of the US environmental movement, the Mid-Hudson Region is home to an engaged, enthusiastic, and highly knowledgeable public around issues of sustainable development. To capture the latent knowledge and expertise – as well as the views and opinions – of the Mid-Hudson Region’s residents, the sustainability planning process included an extensive public engagement effort. This effort was designed to maximize the opportunity for input, taking into consideration the considerable constraints imposed by the aggressive project schedule.

This Appendix describes the approach and outcomes of the public engagement process, and includes a timeline of events and key activities.

A.1 Engagement Approach

The public engagement process sought important insights and information on the Region. As such, the people targeted as part of the engagement effort included:

- Elected officials/government employees at the local, state, and federal level
- Business owners/employees
- Representatives of non-profit organizations
- Local experts and university researchers
- Members of the general public
- Regional Economic Development Council members

To reach these different constituencies, a Consortium and six Working Groups were formed. Additionally, a series of strategies were implemented to facilitate participation, including:

- Stakeholder Interviews
- Operation of the Engage MidHudson site
- Operation of the Basecamp site
- The Use of Press Releases
- Public Meetings
- A Public Review Process
- Briefings on the Project to the REDC

Note that many of these components are described in detail in the Project Execution Plan and in associated guidance memoranda.



A.2 Key Participant Groups

A.2.1 The Consortium

The governing body of the planning effort, known as the Consortium, is made up of members from local governmental and nongovernmental organizations from around the Region. The goal in forming the Consortium was to ensure representation from all seven counties, with a balance of northern and southern and urban and rural constituencies.

The planning process sought to ensure participation from stakeholders who would likely be involved in the implementation of the Plan. In order to be a part of the Consortium, member organizations had to agree to volunteer at least the equivalent of a senior planner to take part in the monthly meetings. Many Consortium members had direct participation by Commissioner/management level staff. Consortium members are as follows:

- Dutchess County
- Orange County
- Putnam County
- Sullivan County
- Ulster County
- Town of Greenburgh
- Center for Research, Regional Education, and Outreach (CRREO)
- Pace Land Use Law Center - Mayors' Redevelopment Roundtable
- Northern Westchester Energy Action Consortium (NWEAC)
- Southern Westchester Energy Action Consortium (SWEAC)
- Also, the following governmental and non-governmental partners contributed to the work of the Consortium.
- Rockland County
- Westchester County
- Mid-Hudson Regional Economic Development Council
- New York Council of Nonprofits (NYCON)

Additionally, the Consortium hired a team of consultants to act as coordinators and technical subject matter experts. The Consultant Team worked with a subgroup of the Consortium known as the Project Coordination Team in order to manage the logistics of the project while also working with Working Groups as the subject matter experts. Together, the Consultant Team helped link the Consortium to the Working Groups and ensure that information was shared broadly yet appropriately.



The Consortium met monthly during the planning process, starting in April 2012 and continuing into 2013.

A.2.2 Working Groups

The six Working Groups convened as part of the planning process constituted one of the central participant groups intended to engage the public in creating the Plan. Working Groups were created in alignment with the main focus areas of the Plan. The goal in assembling the Working Groups was to ensure that each focus area would have input from stakeholders in the Region with intimate knowledge of the issues at hand, as well as a stake in seeing real, positive change. The intent was to target individuals or organizations that are positioned to have a real impact in implementing any recommendations to come out of the Working Groups.

Each Working Group was made up of members of local government, non-profit organizations, businesses, universities, and other organizations or Consortia. The Working Groups were intended to be inclusive, open to all willing to contribute, and seeking representation from all parts of the Region (north/south, rural/urban, private/public, etc.). Each group was led by at least one governmental and non-governmental co-chair, as well as a representative of the Consortium. Consulting and Project Coordination Team liaisons were also assigned to each Working Group.

The Working Groups were populated through a widely-advertised volunteer process where people could either nominate someone for membership or self-nominate. Multiple calls were made for members; new members were allowed to join even partway into the planning process. Co-chairs for each Working Group were selected in much the same way, although they were required to agree to a larger commitment and demonstrate knowledge of the subject matter, as they were placed into a leadership position.

The Working Groups convened in person a minimum of four times during the planning process. Additionally, many Working Groups chose to meet on other occasions, or as distinct sub-groups. Multiple strategies were devised to facilitate participation and Working Group engagement outside of the formal meetings.



A.3 Engagement Strategies

A.3.1 Stakeholder Interviews

Goal

The Consulting Team conducted at least three stakeholder interviews per Working Group in order to rapidly identify the most pressing issues within each focus area. Specifically, the interviews sought to determine the following:

- Trends and priority issues as they relate to sustainable development in the Region
- Existing plans and data to inform the Baseline Assessment
- Current initiatives contributing to the Region's sustainable development
- Potential concepts or projects that could further the Region's sustainable development objectives
- A secondary goal of the interviews – conducted in the first months of the planning process – was to raise awareness of the Plan and process.

Process

Interviewees were chosen via discussion between the Working Group Co-Chairs and Consultant Team with the goal of speaking to individuals with deep local knowledge within each focus area. Interview questions were developed by the Co-Chairs and the Consultant Team. An example of the interview questions asked can be found in Attachment 4. Each interview was roughly 30 minutes in length.

Outcomes

The interviews informed the Baseline Assessment of current initiatives contributing to the Region's sustainable development. They also helped identify potential concepts or projects that could further the Region's sustainable development objectives. Most interviewees subsequently participated in Working Groups during the remainder of the planning process.

A.3.2 Engage MidHudson

Goal

Designed by the company MindMixer, *Engage MidHudson* is a website that was set up in order to provide the general public with the opportunity to engage in discussions about issues relevant to the Plan. Specifically, the site allowed for people who were otherwise unable to participate in the Working Groups to share their ideas and for members of the Consulting Team to solicit feedback from the general public on certain topics.



Process

An Engage MidHudson Web announcement flyer was designed and circulated to begin spreading the word about the site throughout the general public and Working Group members. This was circulated widely by the planning Consortium and other participants.

Once the site was launched, the Consultant Team and the Working Groups developed discussion topics which were then posted to Engage MidHudson. The general public was then free to comment and debate in a “town hall” atmosphere on the website. Discussion topics came in various formats that allowed for different information to be gathered, including but not limited to polls, surveys, idea submission, and open-ended discussion. The homepage and an example discussion page can be seen in Figures 1 and 2.



Figure 1 and Figure 2

Outcomes

Engage MidHudson now has over 400 members of varying demographic backgrounds from all over the Region – Figures 3, 4, and 5 provide some background on the user community as of Dec. 13th, 2012. Members have submitted more than 200 ideas and hundreds of comments which have helped spark discussions within the Working Groups. An example of a question and its responses can be seen in Figure 6.

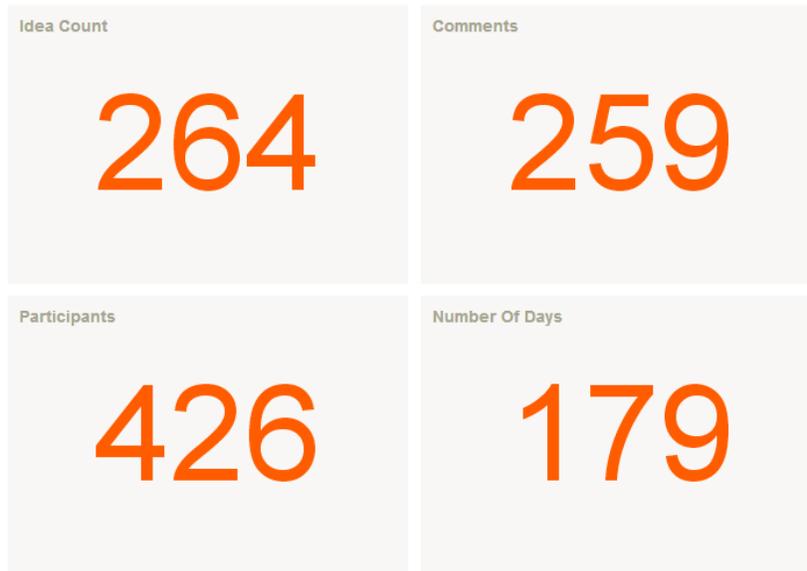


Figure 3

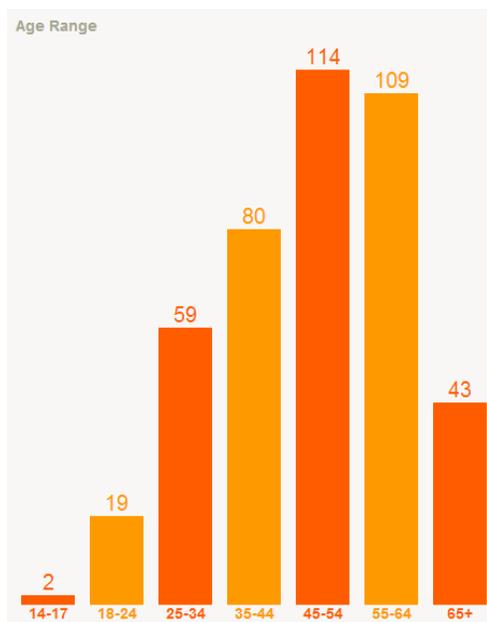


Figure 4



Figure 5

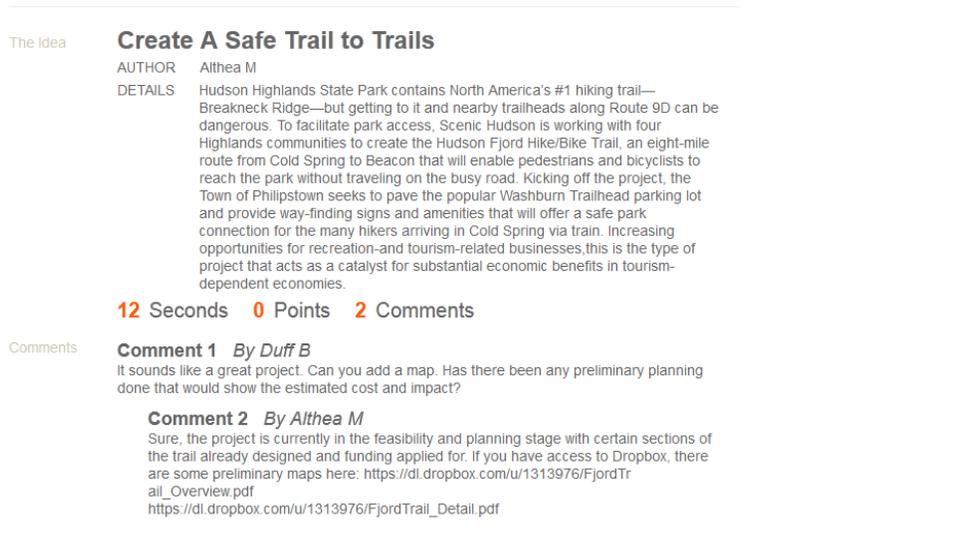


Figure 6



A.3.3 Basecamp

Goal

In order to better manage the contribution of the Working Groups and to provide a private forum for Working Group discussion, the web-based tool Basecamp was used. Basecamp allowed the Consortium, Project Coordination Team, Consultant Team, and Working Groups to communicate efficiently and effectively throughout the planning process.

Process

Basecamp acted as a platform where documents could be shared and discussions held. It provided a central area where the project managers could provide guidance and updates on overall progress. It allowed Working Group members to continue discussions between in-person meetings. Figure 7 shows a portion of the home screen for Basecamp and how information was grouped into individual discussion areas. Figure 8 shows an individual discussion area with a series of discussion threads.



Figure 7



Energy Working Group

Discussions Post a new message

Economic Development Recommendations - From Melissa Everett: Here is polished version of economic development recommendations, which now include bringing industry/

Dec 10

NYS Climate Action Plan - Thanks Nina, I will delve and hope others will also. Wish we had even one more week before comment period ends. Melissa Melissa Everett, Ph.D. Executive

Dec 3 1

Revised Draft Sustainability Plan - Please see the revised draft of the Plan. We've done our best to respond to early comments. We'll continue to revise the document to ensure we

Nov 30

Resource on potential of renewable energy: NREL... - Sorry if this has been posted here before (if so, I haven't seen it). On the charts, you can look up New York State's total

Nov 29

Energy Working Group Meeting to focus on Draft... - An Energy Working group meeting on Thurs., Nov. 29 at 3 p.m. at the Greenburgh Town Hall at 177 Hillside Ave, White Plains, NY

Nov 29

Tracking the Sun: An Historical Summary of the... - <http://emp.lbl.gov/sites/all/files/LBNL-5919e-REPORT.pdf> The latest edition of Lawrence

Nov 29

Solar Jobs - Growing Industry The growth of the solar industry may soon face the reality of not having enough skilled workers to satisfy demand, suggests a recent

Nov 27 5

New York AREA comments on MHRP Draft Report - I completely agree we should include environmental justice in our plan, as we've discussed earlier. I also

Nov 27 3

energy policy notes for drafting MHRP EN chapter - Nina - I am currently Construction Chair on a passive house project for Sullivan County Habitat for

Nov 20 5

Figure 8

Outcomes

Over the duration of the planning process, more than seven gigabytes of data were stored and distributed on Basecamp. Hundreds of discussions were initiated. Best practice case studies, implementation resources, and other useful material was shared. Basecamp also provided the means for the Plan to be distributed privately for comment by members of the Consortium, Working Groups, and Consultant Team once the document became too large to email effectively. As of December 13th, 2012, 296 people have created Basecamp accounts.

A.3.4 Press Releases

Goal

Throughout the planning process multiple press releases were distributed by the Consortium regarding different events and public meetings held throughout the Region. These press releases were designed to spread the word and help raise awareness of the public meetings so as to ensure good attendance. Press Releases were circulated to a diverse list of print, social and radio media sources; a list of media sources used is included as an attachment. The press releases also helped inform the public of opportunities to contribute and review the draft Plan.



Process

Press releases were sent out to the local news media as well as posted to Engage MidHudson and distributed virally via personal email. Press Releases created throughout this planning process are included as an attachment. Major press releases include:

- Public Meeting #1 July 30th, 2012
- Public Meeting #2 November 27th, 2012
- Public Meeting #3 November 29th, 2012

Outcomes

The press releases were a vital part of generating interest and participation in the planning process. Attendance at public meetings, participation in the Working Groups, and other activities directly benefited from the increased press. Hundreds of comments were also received on the public draft of the Plan.

A.3.5 Public Meetings

Goal

Three public meetings were held over the course of the planning process. The first meeting was an introduction to the public of the project scope and process such that they could become familiar with the way the project was being run. The second and third meetings were presentations of the draft Plan that gave the public the opportunity to comment and receive direct feedback from the Consultant Team.

Process

For each public meeting, the format was similar, beginning with a presentation by the Consortium Co-Chairs and the Consultant Team Project Manager followed by a question and answer period providing members of the public with an opportunity to discuss the Plan and process. This gave the public a chance to directly question members of the Project Coordination Team and Consultant Team about the Plan.

Outcomes

More than 100 people attended each of the three public meetings held throughout the Region. Figures 9 and 10 are photos taken at two of the events. As a result of the public meetings, the Consultant Team was able to raise awareness of the existence of the planning effort, solicit ideas for inclusion in the Plan, and receive comments and feedback on the draft Plan. After all three public meetings, site traffic on *Engage MidHudson* increased and more people joined the



discussions. Additionally, each meeting was attended by local media which were able to further spread information on the Plan.



Figure 9



Figure 10

A.3.6 Public Review Process

Goal

The goal of the public review process was to ensure that the public had the opportunity to comment on a draft of the Plan prior to it being finalized and delivered to NYSERDA. While there was not enough time in the planning process to administer a formal period of public



comment and review according to governmental standards, the planning team sought to provide as much time for input as possible.

Process

Multiple rounds of review were undertaken. For the Baseline Assessment (which included the Climate Change Vulnerability Assessment and the draft Regional GHG Inventory), the Project Coordination Team completed an initial review. The Working Groups were then provided time to review and submit comments. The Baseline Assessment was then revised and submitted to NYSERDA for review and approval.

The draft Plan was first reviewed by the Project Coordination Team in late October. It was subsequently sent to the Consortium for review in early November. Because of the time pressure in the schedule, the draft was subjected to a parallel review/revision process.

In mid-November a revised draft was circulated to the Working Groups for review. On November 21st the first public draft was posted for review. This draft was updated on November 30th, and comments were accepted through December 10th. A final draft was submitted to NYSERDA on December 18th.

Comments were solicited using a spreadsheet posted as a Google Doc so that anyone with a computer and internet access could post their comments in a clearly defined rubric. By using this system, the Consultant Team was better able to keep track of comments received and ensure they were acknowledged and addressed.

Outcomes

More than 380 comments were received via the Google Doc and subsequently addressed by the Consultant Team. Several hundred additional comments were received via email or phone. A complete list of comments received in the Google Doc from both the general public and the Working Groups is included as an attachment. The public review has provided additional legitimacy to a planning document developed through a collaborative, inclusive process.

A.3.7 REDC Briefings

Goal

The REDC is a key Plan constituency as they are responsible for updating the Regional Economic Development Strategy and, in part, awarding project funds via the Consolidated Funding Application process. Aligning the Plan and its implementation efforts with the work of the REDC is critical. The REDC briefings were designed to educate the REDC on the



planning process and how it sought to address thematic issues like economic development in the Region.

Process

Members of the Consortium, including the Co-Chairs, were invited to speak at certain REDC meetings. At these meetings the Co-Chairs presented on the status of the planning effort. A presentation of the draft Plan is currently being scheduled.

Outcomes

Out of these meetings, the sustainability planning process was able to better coordinate its goals with those of the REDC. For example, as the REDC revised and updated its draft Economic Development Strategy, members of the Consortium and the Consultant Team were able to provide targeted input. Henceforth, the REDC has formally referenced the Plan in a section of the REDC's goals document. It is hopefully that this initial engagement will result in additional involvement with the REDC by members of the sustainability planning team.

A.3.8 Conclusions

The networking, discussion, and overall engagement that resulted from this planning process are unprecedented in the Region. Hundreds of people interacted on a regular basis to discuss issues of short- and long-term concern, in an effort to create a vision for a sustainable future. Relationships were built, partnerships established, and new dialogue initiated.

During the implementation stage, the cooperation and collaboration exhibited during the planning process may prove foundational to ensuring the ideals and goals of the Plan are realized. New partnerships and relationships have been formed, which provide a strong basis to begin implementing real change. This should, among other things, help ensure that Phase II of the Cleaner Greener Communities program is a success and results in lasting positive change.

Attachments

- Working Group Nomination Card
- Four Page CGC flyer
- Media Resources List
- Public Meeting Announcement for *Engage MidHudson*
- Public Meeting Press Releases
- Working Group Guidance Document
- Project Idea and Nomination Form
- Public Comment/Response



B Indicator Data Sources and Calculations



The following series of tables shows the metric, calculation and data sources used in the Indicator Inventory for each of the plan focus areas.

Table B.1 – Land Use, Livable Communities, and Transportation

Metric	Calculation	Data Source
1a. Acres of urbanized land per capita	$(\text{Total acreage of urban development}) / (\text{Total population})$	Urban development data – Urban Area, U.S. Census Population – U.S. Census
1b. Percent of population and jobs in centers supported by transit	Center – An area that meets the corresponding thresholds in each of the following categories: <ul style="list-style-type: none"> • Road Connectivity > 20 intersections/mi². • Area must be < 5 miles from a train station • Area must have > 1 bus stop/mi² • Transit score > 1 • Walkability score > 0.3 	Road Data – U.S. Census TIGER Transit Data – RPA, Ulster County, MTA Metro North Schools Data – NYS Department of Education Population Data – U.S. Census Jobs Data – U.S. Census Transportation Planning Package
2a. Ratio of the number of jobs to the number of housing units	$(\text{Total jobs}) / (\text{Average housing units} / \text{Census tract})$	Most recent U.S. Census CTPP available
2b. Ratio of average annual job pay to median home values	$(\text{Average salary put to a 1-10 scale}) / (\text{Median home value normalized to a 1-10 scale per census tract})$	Salary data – County business patterns Home value data – U.S. Census, ACS
2c. Share of housing permits issued for units in multi-family (5+ units) buildings	$(\text{Total permits issued for housing units in multifamily buildings}) / (\text{Total permits issued for all housing units annually})$	U.S. Census, ACS
2d. Percent of people living within one half mile of a park	$(\text{Total number of people living within one half mile of a park}) / (\text{The total population})$	Parkland data - Scenic Hudson. Population data - U.S. Census
3a. Gallons of gasoline sold per registered vehicle	$(\text{Total annual gallons of gasoline sold}) / (\text{Total active vehicle registrations})$	NYSERDA / NYSDMV
3b. Change in carpool, transit, and non-motorized minus change in single occupant vehicle work trips	$(\text{Change in the percentage of work trips by carpool, transit, bike, and walk}) - (\text{Change in the percentage by single occupant vehicle})$	Most recent U.S. Census CTPP available and ACS
3c. Annual vehicle miles traveled	Total annual vehicle miles traveled	NYSDOT



Table B.1 – Land Use, Livable Communities, and Transportation

Metric	Calculation	Data Source
3d. Active vehicle registrations per 1,000 capita	$((\text{Total active vehicle registrations}) / (\text{The total population})) / 1,000$	NYSDMV
3e. Hudson River bridge crossings per registered vehicle	$(\text{Total annual Hudson River bridge crossings}) / (\text{Total active vehicle registrations})$	Bridge data – NYSBA Vehicle Registrations - NYSTA
3f. Annual commercial truck traffic at all toll barriers in the Region	Total annual commercial traffic at toll barriers	NYSBA
3g. Transportation fuel use (MMBtu) per capita	$(\text{Total transportation fuel consumption (in MMBtu)}) / (\text{The total population})$	Regional Tier 1 or 2 Greenhouse Gas Inventory, DOT, DMV, CAFÉ impact, NYMTC
3h. Transportation GHG emissions per capita	$(\text{Total transportation GHG emissions}) / (\text{The total population})$	Regional Tier 1 or 2 Greenhouse Gas Inventory, DOT, DMV, CAFÉ impact, NYMTC
4a. All injuries due to motor vehicle accident per 10,000 registered vehicles	$((\text{Total injuries due to vehicle accidents}) / (\text{Active vehicle registrations})) / 10,000$	NYSDOH, Bureau of Injury Prevention
4b. Pedestrian and bike injuries due to vehicle accidents per 10,000 registered vehicles	$(\text{Total pedestrian and bike injuries due to vehicle accidents}) / (10,000 \text{ active vehicle registrations})$	NYSDOH, Bureau of Injury Prevention
4c. Percent of bridges that are classified as “structurally deficient”	$(\text{Total number of bridges classified as structurally deficient}) / (\text{The total number of bridges})$	NYSDOT
4d. Average condition rating of road pavement	Average annual condition rating of road pavement by county	NYSDOT
4e. Percentage of the passenger rail network located in FEMA 100-year floodplains and SLOSH hazard areas	$(\text{Number of miles of rail lines in SLOSH zones and FEMA 100 year floodplains}) / (\text{The total rail line miles})$	National Weather Service (NWS) and MTA Metro-North
4f. Roads in FEMA 100-year floodplain and SLOSH zones	$(\text{Number of miles of road in FEMA 100 year floodplain and SLOSH zones}) / (\text{The total road miles})$	National Weather Service (NWS) and NYSDOT
4g. Population in FEMA 100-year floodplain or SLOSH zone	$(\% \text{ of land area of Census tract in SLOSH zone}) \times (\text{Population of Census tract})$	National Weather Service (NWS) and US Census



TABLE B.2 - ENERGY		
Metric	Calculation	Data Source
1a. Energy intensity: Regional energy consumption (MMBtu) per capita	(The sum of annual energy uses by sector) / (The total population) Where the sum of regional energy consumption = Residential Energy Consumption + Commercial Energy Consumption + Industrial Energy Consumption + Transportation Energy Consumption	Energy use data - Regional Tier 2 Greenhouse Gas Inventory, NYSERDA and US EIA; Subcomponents include annual energy use for residential, commercial, industrial, and transportation; ¹
1b. Stationary fossil fuel use (MMBtu) per capita	Regional fossil fuel combustion in stationary sources per capita = (The sum of fuel combustion for space heating and cooling) / (The total population ²)	Energy uses from Regional Tier 2 Greenhouse Gas Inventory, NYSERDA and US EIA Subcomponents include annual energy use for residential, commercial, industrial, and transportation
1c. Stationary fuel consumption GHG emissions (MTCO2e)	See Regional GHG Inventory	See Regional GHG Inventory
2a. Installed capacity (MMBtu) per capita	(The sum of renewable installed generation capacity) / (The total population) Where the sum of the capacity of all on-site renewable energy sources = On-Site Solar PV Capacity + On-Site Solar Thermal Capacity + On-Site Wind Turbine Capacity + On-Site Geothermal Capacity + Capacity of Other On-Site Renewable Sources	NYSERDA and Regional Tier 2 Greenhouse Gas Inventory Subcomponents include cumulative generation capacity from installations of PV, solar thermal, wind, biomass, geothermal, etc.

¹ Energy use intensity: A further refinement would be Energy intensity per dollar of Gross Regional Product.

² Stationary fossil fuel use intensity: A further refinement would be weather-normalizing this use annually: $\sum \text{Fuel Combustion for each fuel type} = [(\text{Btu}/\text{Household}/\text{HDD for space heating}) \times \text{HDD} \times (\# \text{ of households})] + [(\text{Btu}/\text{Household}/\text{CDD for space cooling}) \times \text{CDD} \times (\# \text{ of households})] + [(\text{Btu}/\text{Household for dhw}) \times (\# \text{ of households})] + [(\# \text{ of Employees in region} / \# \text{ of employees in state}) \times \text{Statewide commercial consumption}] + [(\# \text{ of Employees in region} / \# \text{ of employees in state}) \times \text{Statewide Industrial consumption}] - [\text{Industrial fuel consumption} \times \% \text{ consumed in non-energy uses}]$



TABLE B.3 MATERIALS MANAGEMENT

Metric	Calculation	Data Source
1a. Per capita MSW disposal (lbs/person/day)	Weighted population average of ((Annual lbs MSW) / (County population)) / (365 days/year)	County Planning Unit, Solid Waste Management Plans
2a. Recycling Rate (%)	Weighted population average of (Total materials recycled (MSW +C & D) per county / Total materials generated per year per county)	County Planning Unit, Solid Waste Management Plans
2b. GHG Emissions (Million MTCO _{2e})	See Regional GHG Inventory	See Regional GHG Inventory



TABLE B.4 AGRICULTURE AND OPEN SPACE

Metric	Calculation	Data Source
1a. Acres of farm land	Total acres of farmland	USDA Census of Agriculture
1b. Number of farms	Total number of farms	USDA Census of Agriculture
3a. Number of farmers markets	Total number of farmers markets	County Tourism Offices of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester Counties
3b. Number of municipal markets	Total number of municipal markets	County Tourism Offices of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester Counties
4a. GHG emissions (MTCO ₂ e)	See Regional GHG Inventory	See Regional GHG Inventory
5a. Net cash farm income in the Region	$(\text{Total cash farm receipts}) / (\text{Total cash farm costs})$	USDA Census of Agriculture
5b. Net cash farm income per farmer	$((\text{Total cash farm receipts}) / (\text{Total cash farm costs})) / (\text{Total number of farmers})$	USDA Census of Agriculture
6a. Acres of land preserved from development	$(\text{Total land preserved}) / (\text{The total Population})$	Scenic Hudson, US Census
7a. Average acreage of contiguous forests	$(\text{Total acreage of contiguous forest}) / (\text{The number of counties in the Region})$	NYSDEC



TABLE B.5 WATER		
Metric	Calculation	Data Source
1a. Per capita water withdrawals for domestic self-supply	$(\text{Total water withdrawals for domestic self-supply}) / (\text{The total population})$	United States Geological Survey (USGS) Estimated Use of Water in the United States, County-Level Data for 2005
1b. Per capita water withdrawals for public supply	$(\text{Total water withdrawals for public supply}) / (\text{The total population})$	United States Geological Survey (USGS) Estimated Use of Water in the United States, County-Level Data for 2005
2a. Energy use per gallon of wastewater	$(\text{Total energy used}) / (\text{Gallons of potable water used})$	Energy Estimate: Water & Sustainability (Volume 4): U.S. Electricity Consumption for Water Supply & Treatment - The Next Half Century, Electric Power Research Institute (EPRI), 2002
3a. HUC 12 watersheds with >10% impervious cover	GIS mapping	United States Geological Survey (USGS) – National Land Cover Database, Percent Developed Imperviousness, 2001 and 2006
4a. Annual expenditure per volume of water treated	$(\text{Annual expenditure}) / (\text{The total volume of water treated for water production})$	United States Geological Survey (USGS) Estimated Use of Water in the United States, County-Level Data for 2005
4b. Annual expenditure per volume of wastewater treated	$(\text{Annual expenditure}) / (\text{The total volume of water treated for wastewater treatment})$	2004 Descriptive Data of Municipal Wastewater Treatment Plants in New York, NYSDEC; United States Environmental Protection Agency (USEPA) Enforcement and Compliance History Online Database
5a. Percent of assessed 303(d) streams/water bodies that are impaired	Total number of impaired water bodies	NYSDEC Waterbody Inventory and Priority Waterbodies List (WI/PWL), 2007; U.S. Department of Agriculture Watershed Boundary Dataset 2009.
5b. Percent assessed	$(\text{Total number assessed}) / (\text{Total number of streams})$	NYSDEC Waterbody Inventory and Priority Waterbodies List (WI/PWL), 2007; U.S. Department of Agriculture Watershed Boundary Dataset 2009.
5c. Percent of streams assessed under biomonitoring program	$(\text{Total number assessed}) / (\text{Total number of streams})$	NYSDEC Stream Biomonitoring Program, 2012



C List of Project Ideas

C: List of Project Ideas



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
1	Agriculture and Open Space	Sustainable Livestock Production in the Hudson Valley	Mid-Hudson Region	Glynwood, Inc., Urban Design Lab at Columbia University	To address the gap between supply and demand, this project will promote sustainable meat production in the region through research on land assets, the development and dissemination of on-farm best practices and GHG impact measurement for conventional versus local supply chains. Activities will include 1) analysis of the current extent of livestock production, 2) assessment of potential grazing land using available statistics, 3) lifecycle analyses comparing production, processing and transportation of local, pastured meat versus conventional meat, and 4) an experimental and training program to develop production and marketing best practices for pastured livestock.
2	Agriculture and Open Space	Groundwork's Sustainable Food Programs	Yonkers	Groundwork	With a local developer, Groundwork is exploring the feasibility of building a 10,000 sq. ft. rooftop farm that would utilize Science Barge technologies on a much larger scale. The project would train and employ local residents in hydroponic/aquaponic farming techniques as well as business management and marketing skills.
3	Agriculture and Open Space	Connecting Farmers and Preserving the Landscapes	Westchester and Putnam Counties		The goal of the land match initiative is to renew, restore and strengthen the farm to table connection, build local food sheds and contribute to the sustainability of the community. Land matches return land to agriculture use and nourishes the local community in the present and for future generations.
4	Agriculture and Open Space	Whitecliff Winery Retrofit and expansion	Whitecliff Vineyard		The building features a state of the art geothermal heating and cooling system utilizing one mile of piping and 500 feet of trenching along with equipment upgrades to enhance their energy efficiency. The example of this winery can be expanded to other wineries around the Region so that others may increase their efficiencies as well.
5	Agriculture and Open Space	Improving access, availability and identification of healthy foods in community settings through mobile farmers markets, community gardens, and local foods access points for institutional purchasing	Mid-Hudson Region	Cornell Cooperative Extension Dutchess County	Cornell Cooperative Extension (CCE) staff will work with community planning, institutions, agricultural providers, faith-based organizations, individual residents and other stakeholders to expand on current successes and efforts to integrate mobile farmers markets to provide coverage to rural and urban counties, to incorporate school and community gardens in settings accessible to community residents and institutions serving youth, families, disabled and the aging, and to establish food hubs/microbusiness units for the facilitation of local and regional food purchasing by institutions and retail outlets. Planning and development groundwork has already been laid in Dutchess and Ulster counties, with partnerships in place for expanding best practices and new opportunities to the neighboring counties in the Hudson Valley. Some grant sources/seed money is already in use for development and operations. Project funds would be used to



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
					create systems and infrastructure development, as well as stakeholder buy-in within the communities, through education and community engagement in to the project initiatives.
6	Agriculture and Open Space	Saving the land that matters most	Mid-Hudson Region	Scenic Hudson Land Trust	Scenic Hudson is working in collaboration with 16 fellow land trusts and government agencies to save ridgelines offering iconic views, forests and wetlands critical to maintaining the Hudson Valley's extraordinary biological diversity and farmland essential to creating a sustainable "foodshed" for the region and NYC. In addition to providing the cornerstone of a sustainable economy for the region, protected lands help attract new business. A recent study by the trust for public land notes that executives looking to relocate or start-up firms rank quality of life - including an abundance of parkers and open space - higher than housing, cost of living, and good schools. To date, the saving the land that matters most initiative has conserved more than 6800 acres.
7	Agriculture and Open Space	Mobile Unit Meat Processing – (MUMP)	Dutchess County and New York State	Cornell Cooperative Extension Dutchess County	Farm sustainability is critical, weather patterns are changing, pressure to raise quality meats is increasing and all farms in the mid-Hudson Valley region are struggling with profitability issues. Slaughter facilities are at capacity and the need for more regional mobile slaughtering units is growing. Mobile units, when located in appropriate locations paired with a processing facility will ensure that locally raised meats can remain competitive in the current and future markets. Feasibility studies have been done in recent years that point to a serious need for more USDA inspected slaughter facilities by producers. Mobile Slaughtering units can fit the need without the risk of permanent structures, would provide local job opportunities for food processors, butchers, inspectors and new farm workers. As the slaughter, butchering and processing can all be done within close range of each other, out lays will be reduced for the farmer and increases in overall profitability will ensure that farms continue to grow and expand in the region and thus remain sustainable. A marketing initiative will also be incorporated into the program through the producer cooperative and conducted by Cornell Cooperative Extension Dutchess County (CCEDC). Cornell Cooperative Extension Dutchess County will oversee the project, establish a producer cooperative similar to ones that have been establish in nearby states, such as Rhode Island. CCEDC is uniquely qualified for instituting a project such as this with the available resources of staff and Cornell University and our strong ties to the agricultural community.
8	Agriculture	Improving	Mid-Hudson	Cornell	Cornell Cooperative Extension (CCE) staff will work with community planning,



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
	and Open Space	community walkability and access to essential goods and services through small scale systems change and infra-structure modifications.	Region	Cooperative Extension Dutchess County	institutions, agricultural providers, faith-based organizations, individual residents and other stakeholders to expand on current successes and efforts to alter systems and environments to enhance community walkability, bike-ability and access to goods and services. Improving ease of access to and placement of goods and services within communities will enable families to remain within the community when seeking food, supplies, entertainment and support while also providing opportunities for “aging in place”, increasing physical activity for reduction in chronic diseases, and reducing need for transportation systems. For example, in Dutchess County alone, four rural towns have sidewalks that stop ¼ mile from the grocery stores. This prevents anyone from walking to the store- even though many desire such-in a safe manner. Education, infrastructure modifications, and community engagement in such development as “Complete Streets” and “Safe Routes to School” will enable communities to create safe access to goods and services while reducing the need for single passenger transportation or mass transportation in many settings.
9	Agriculture and Open Space	Planning for sustainable septic system reliance in suitable areas	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	<p>While the proportion of urbanized land in the mid-Hudson region (22.2%) is higher than that across the entire state (9.1%), the majority of land in the mid-Hudson region is still rural. Wastewater treatment in these rural areas is provided almost entirely by individual septic systems. In order to provide sustainable water quality and improve the reliability of water and wastewater treatment in the rural areas of the region, officials responsible for land use planning must know where soil and groundwater conditions limit the landscape’s ability to support septic systems. Local zoning should encourage smart growth development in rural areas where conditions are not limiting to septic system function and discourage development where conditions are very limiting to septic system function. Communities should also consider planning for future wastewater treatment infrastructure in densely developed pockets within rural areas or in rural areas zoned for dense development where septic system function is limited.</p> <p>Tools provided by USDA Natural Resource Conservation Service (NRCS) can be used to determine where soil conditions limit septic system function. The goal of this project is to compare the location of assumed septic systems (based on tax parcel and assessment information) and local zoning to septic system rating maps generated by the NRCS tools in order to identify areas where density of existing</p>



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					<p>development or the density allowed by local zoning is limited by limited septic system function.</p> <p>The resulting maps will help local officials responsible for land use planning identify areas where:</p> <ul style="list-style-type: none"> ▪ zoning may need to be examined to allow for higher or lower densities that could potentially be supported; ▪ planning for future wastewater treatment infrastructure should be considered; ▪ development should be discouraged to maintain local water quality. <p>Cornell Cooperative Extension (CCE) staff will work with farmers through existing networks to increase the rates of energy efficiency and incorporation of renewable energy on farms in the Mid-Hudson Valley region. While New York State has numerous energy efficiency and renewable energy programs that agricultural operations can apply to, a program specifically geared toward the agricultural community ended in 2011, and adoption of energy efficiency practices in the region could be significantly improved through a targeted program. Challenges include the difficulty of accessing information, lack of time to research alternatives, cost, and lack of trust in the process. Cornell Cooperative Extension is a strong community partner with trusted relationships built over the long-term with the agricultural community. CCE will first assess the level of understanding of energy efficiency and renewable energy options in the agricultural community, barriers, and specific needs. Working with the Cornell Cooperative Extension Statewide Energy and Climate Change Team, existing networks and programs, and state partners, CCE educators will then to develop targeted tools to help more farmers complete more farm energy audits, apply for existing funding or incentive programs, and put energy efficiency changes into place. CCE will also develop clear information and cost-benefit tools to help inform farmers' decisions about renewable energy options. This project will help contribute to sustainability in the region by improving farm viability and the resiliency of local agricultural operations. There is strong possibility that the project can be replicated to other regions of NYS through close collaboration with Cornell University and regional Extension networks. CCE program outcomes are tracked through development of logic models and continuous evaluation. Cornell University would be responsible for ongoing maintenance of the tools</p>



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11	Agriculture and Open Space	Conserve the Valley's Breadbasket	Red Hook	Scenic Hudson Land Trust	<p>that are developed, and made available via extension websites.</p> <p>In addition to supplying local residents via farmers' markets, CSAs and pick-your-owns, Hudson Valley farms are a major provider of fresh nutritious food to NYC greenmarkets and restaurants. Yet while the population in these two regions is growing, productive valley farmland continues to vanish, in part because farmers are retiring and a new crop of young farmers can't afford it. Partnered with land trusts, government and farmers Scenic Hudson is engaged in conserving a "critical mass" of highly productive farmland in Red Hook - one of the valley's prime agricultural communities. By securing conservation easements on family-owned farms, partnerships enable existing farmers to invest in their operations and put land prices within financial reach of new farmers - in the process of guaranteeing our future food security.</p>
12	Agriculture and Open Space	Consolidating Regional Protected Lands Information into a GIS Database to Promote Land Conservation and Climate Change Adaptation Efforts	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County (CCEDC)	<p>Comprehensive land use planning is required to create a sustainable future for the Mid-Hudson Region. The goals of sustainable planning efforts should include increasing preserved land, increasing access to parkland, and maintaining unfragmented forest. This project would result in a comprehensive, standardized, annually updated GIS database of protected lands in the six-county region to aid local and regional sustainable land use planning and conservation efforts.</p> <p>Municipal comprehensive planning committees, county planning departments, conservation organizations, and regional planning entities need accurate, up-to-date, and easy-to-access geographic information about the type and extent of protected lands in their communities and throughout the region. However, there is no source of protected lands data that meets these criteria. Instead, planners must often piece together geographic data produced by various agencies and organizations, spending significant time reconciling the varying levels of resolution and accuracy, attribute information, and overlapping and/or duplicate records in these data in order to capture a reasonable picture of protected and conservation lands in their communities.</p> <p>As project lead, Cornell Cooperative Extension (CCE) would work with land trusts, county tax departments, conservation organizations, and others to gather all available information about protected lands into a single GIS database, reconciling all inconsistencies to provide an accurate and consistent resource of information about each parcel of protected land in the region. CCE would be</p>



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					responsible for annual updates.
					Scenic Hudson, which annually solicits protected lands information from other land trusts throughout the region, would act as a project partner by providing its data. New York Natural Heritage Program would provide guidance on the data structure, which would be based on a statewide database of conservation lands. The resulting data for the mid-Hudson region would be incorporated into the statewide database.
13	Agriculture and Open Space	Mill Brook Preserve Plan	New Paltz	Town of New Paltz Clean Water and Open Space Protection Committee	This Plan provides policies and guidelines for the stewardship of the proposed Mill Brook Preserve. When implemented, it will help the community protect and interpret the biological, recreational, aesthetic, and conservation resources of the landscape that are located here. The long-term mission of this Plan is to preserve, restore and interpret natural plant and animal communities, to protect the landscape and character that is vital to defining the neighborhood and the entire Village and the Town of New Paltz, and to provide for management practices that maximize ecological, educational and recreational benefits while minimizing impacts of such use.
14	Agriculture and Open Space	Rapid Response Training and Tools to Help Farmers Adapt to Extreme Weather and Climate Change in the Mid-Hudson Valley Region.	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	Cornell Cooperative Extension (CCE) staff will work with farmers in the Mid-Hudson Valley to help them adapt to climate change, including documented warmer temperatures and a longer growing season, and an increase in extreme weather, such as heavy precipitation events causing flooding of fields, warm winter spells, sudden spring frost, and prolonged summer drought conditions. Farmers indicate they need access to local information and knowledge of how the climate will continue to change. CCE staff will first assess the impacts of extreme weather on agricultural operations in the region and the specific need for information and tools. They will then work in cooperation with the Cornell University Climate Change Program Work Team to develop targeted tools to help farmers adapt their operations to extreme weather and climate change, using an adaptive management process – or the process of refining a management strategy in response to evaluating its success. This process takes into account data collected for local conditions, and evaluates success based on scientific principles and local experience. One example of a new management tool is the Cornell University Adapt-N Tool for nitrogen management, which uses a computer model and high resolution weather information to provide information on farm-level nitrogen needs. This project would develop similar tools to help



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15	Agriculture and Open Space	Training for collecting, analyzing, and mapping agricultural operations data	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	<p>farmers based on local climate modeling, and will help contribute to the sustainability of the region by improving farm viability and the resiliency of local agricultural operations. There is strong possibility that the project can be replicated to other regions of NYS through close collaboration with Cornell University and regional Extension networks. CCE program outcomes are tracked through development of logic models and continuous evaluation. Cornell University would be responsible for ongoing maintenance of the climate change tools that are developed, and made available via the www.climatechange.cornell.edu website.</p> <p>In order to develop solutions to maximizing the value of the regional agricultural economy, more granular information is needed about the extent and types of farms present in the region. This information can also provide planners and conservation groups with detailed information to expand land conservation efforts, and help target education and training about sustainable farming practices to specific types of operations.</p> <p>For example, identifying the location, type, and relative size of various farm operations can illuminate relationships between them and the economic support they provide to each other. Planners can also use this information to create a clearer picture of agricultural lands in the region, understand the extent of the ecosystem services they provide, and assess the potential impacts associated with them. Educators can identify clusters of different types of farms where educating on specific sustainable farming practices may have the most impact.</p> <p>The goal of this project is to train responsible agencies and organizations in the 7-county mid-Hudson region to collect, store, and analyze this data as part of the state-mandated 8-year review of agricultural districts. This project will build upon the successes and lessons learned during the 2007-2008 agricultural district review in Dutchess County, which was led by Cornell Cooperative Extension Dutchess County (CCEDC) and the Dutchess County Farmland Protection Board, as well as subsequent efforts with Dutchess County Planning and Dutchess County Soil and Water Conservation District to update and refine the data and analysis.</p> <p>As the lead agency in this project, CCEDC would provide the training and tools</p>



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					needed to collect information about farming operations, store the information and a template used to present information to communities, which includes statistics, charts, and map of information gleaned from the data.
16	Agriculture and Open Space	Mentoring New Farmers and Connecting New Farmers to Existing and Traditional Farms	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	<p>Dutchess County is home to nearly 700 farms totaling 102,360 acres (2007 USDA Census). Cost of production has increased, farm sustainability is critical and similar trends are seen throughout the Hudson Valley. The surge in the expansion of niche, small acreage farms reflects the diversity of agriculture in the Mid-Hudson Region. Our target audience is limited acreage and traditional farmers in the Mid-Hudson region</p> <p>Marketing skills are found to be lacking in many of our more traditional farms. At the same time, there has been an influx of people who are new to the farming industry, have smaller properties (50 acres or less) but wish to make their properties “grow” in a productive manner. Many of these beginner farmers have the marketing skills, but not the farm knowledge. Matching the beginner farmers as a new client base to our traditional farmers will not only strengthen our agricultural base, but will encourage mentoring on both sides to develop the skills necessary to succeed in today’s technologically based environment. There is an urgent need to connect new farmers with retiring farmers to continue local farm operations? CCE is in a strong position to create these connections, using well-established farm networks. This project will help contribute to sustainability in the region by improving farm viability. There is strong possibility that the project can be replicated throughout the region regions of NYS through close collaboration with Cornell University and regional Extension networks. CCE program outcomes are tracked through development of logic models and continuous evaluation.</p>
17	Agriculture and Open Space	Workforce preparation: Greenhouse Management	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	Greenhouse production in NYS is a 261 million dollar industry (Ag Census 2007). It is a diversified industry which includes bedding/garden plants, cut flowers, cut florist greens, foliage plants, potted, flowering plants, vegetables, herbs, fruits berries and other floriculture and bedding crops. The commercial agricultural greenhouse industry has difficulty finding and hiring qualified employees knowledgeable in greenhouse production and practices. Other than a college level curriculum there is not much available to greenhouse owners and managers in the Hudson Valley and this translates into a lot of time and money devoted to training employees which can cut into productivity and profitability. Greenhouse



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18	Agriculture and Open Space	Workforce preparation: International Society of Arboriculture (ISA) Professional Arborist Certification Training	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County	<p>production and management is a specialized skill. CCEDC proposes to provide training for individuals with little or no greenhouse work experience as well as skills upgrades for those already employed. All aspects of greenhouse production as well as greenhouse business management and NYSDEC Pesticide Applicator Certification training will be covered. Employees certified to apply pesticides is crucial to efficient greenhouse production practices. CCEDC is in the unique position of having a commercial greenhouse facility on our property. Participants will receive both classroom and hands-on learning experiences. Upon completion of the training participants will be more employable and knowledgeable and contribute a to the sustainability of the greenhouse industry.</p> <p>With the arrival of the newest invasive species, the emerald ash borer (EAB) into the Mid-Hudson region communities will have no choice but to prepare for management of this dangerous insect which is a threat to our native ash. Communities in the mid-west have been decimated by this pest which has killed thousands and thousands of ash trees. The US EPA states trees can reduce bothersome noise by up to 50%. Using trees helps to deflect sunlight and reduces the heat island effect caused by pavement and commercial buildings. Trees provide oxygen, improve air quality, climate amelioration, conserve water and preserve soil. Trees control climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Trees lower the air temperature and reduce the heat intensity of the greenhouse effect by maintaining low levels of carbon dioxide. Both above and below ground, tree roots hold soil in place and fight erosion. Trees absorb and store rainwater which reduce runoff and sediment deposit after storms allowing for ground water recharge, preventing the transport of chemicals into streams and prevents flooding.</p> <p>The demand for qualified arborists is increasing especially with the need to control invasive species. The ISA Certified Arborist Training will train and prepare arborists actively working in arboriculture, to take the ISA Certified Arborist Exam. The result will be a professional and sustainable workforce ready to address invasive species and thus energy conservation</p>
19	Agriculture and Open Space	Agricultural Conservation Easements in the	Town of Red Hook, Dutchess County	Scenic Hudson Land Trust	The assemblage of farm parcels for which Scenic Hudson, the Columbia Land Conservancy (CLC), the Dutchess Land Conservancy (DLC), the Town of Red Hook and the County of Dutchess seeks preservation funding supports some of the



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		Hudson Valley's Breadbasket			region's most productive fields, orchards, and dairy operations. In addition to contributing to the local \$810 million agricultural economy, these farms contain important scenic and historic resources that help drive the region's \$4.7 billion tourism industry. Conserving a "critical mass" of highly productive farmland in projects like these enable existing farmers to invest in their operations and puts land prices within financial reach of new farmers—in the process guaranteeing our future food security. The farm properties include prime soils, statewide important soils, forest land and wetlands designated for special protections by the state Department of Environmental Conservation and U.S. Fish and Wildlife Service. The soils that will be protected from a critical component of the New York City foodshed, and approval of this project will help bolster regional food security and ensure access to high-quality, locally produced fruits, vegetables, and dairy products. As exemplified by Scenic Hudson's recent utilization of federal funds to successfully preserve nearly 680 acres of Hudson Valley farmland, the organization has an outstanding track record of working with federal, state, and local government agencies, partner NGOs, and private funding sources to permanently protect and steward critical agricultural lands and each stakeholder will have some responsibility in the ongoing success of the conservation easement.
20	Agriculture and Open Space	Value-Added Processing for Regionally Grown Produce	Ideally a facility in each county with a strong agricultural base (Ulster, Orange, Dutchess) central to producers and close to transit options.	New York State Department of Agriculture	<p>Commercial food processing for end consumer use at regional facilities (preferably by attracting investment by a known food entity) with access to the commercial food distribution channel. Ideally, the processing of local food products at three consumer price points (economic for families; mid-priced Hudson Valley branded product; luxury Hudson Valley branded product which would be based on a unique Hudson Valley flavor pallet – see below).</p> <p>Partner with Culinary Institute of America in Hyde Park (regional expertise) to develop the flavor pallet to distinguish it from other regions. Capitalize upon local products (fruit, vegetables, meat, cheeses, fowl, herbs) and organic/biodynamic products, locavore, local wines, beers and liquors to express the unique Hudson Valley terroir. A second and natural partner is Valley Table one of the finest magazines in the Country with its focus on local foods, restaurants, taste experiences and farming.</p> <p>This is certainly not a new idea, but one which has been successful in California, France, Spain, South Africa, and Lancaster, PA.</p>



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
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This would add the following elements of sustainability to the Region:

- 1) Agriculture supporting industry with stream of revenue, tax ratable, real jobs at living wages at all levels. These can be filled at many levels by an already experienced and capable workforce.
- 2) Increase demand to meet local supply
- 3) Provide another level of revenue to farms
- 4) Add jobs that are not excluded from the employment figures.
- 5) Local facilities cut down on time and transportation – less fuels, fresher food
- 6) Make local food available at a more approachable price point to economically challenged families – many of whom never get to farmers’ markets. Better nutrition, better health
- 7) Like the dairy farmers of the 1800’s, processing allows local product to penetrate a broader market with a longer shelf life and brings these local products to the attention of the wholesale distribution network. This raises the importance of our Hudson Valley foods for C&S, SuperValu and ShopRite. Can potentially expand the market.
- 8) Adding a Hudson Valley flavor pallet with the support of the CIA and Valley Table (if possible) on the same level playing field with Napa, Sonoma, San Francisco, Provence along with an ever more sophisticated group of locally made wines, beers and spirits. Physical and memorable expression of the benefits of the Hudson Valley - branding 101.
- 9) Encourages a more sustainable tourism (farm tours, local arts and crafts, experience-based events, lodging, cooking schools and test kitchens) and creates a cultural base (particularly in Orange County) that contributes to the desirability of locating a business here.



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21	Agriculture and Open Space	Hilltop Hanover Farm Incubator-Food hub Training Facility	Yorktown Heights, NY	Friends of Hilltop Hanover Farm & Environmental Center	<p>Hilltop Hanover farm is an ideal place to establish an “incubator farm – food hub”. The land is owned by the County of Westchester and operated by a non-profit friends group. There is already infrastructure and programming in place. The program proposal would help build & sustain our local food system through the expansion of our existing WCC Agricultural Certificate Program – which would include an on-the-job apprenticeship program and development of the farm into a “cooperative hub” by:</p> <ul style="list-style-type: none"> ▪ Enhancing the viability of farming by providing access to training, equipment, resources and markets. ▪ Serve as a local Foodhub for distribution. Promote the sustainable use and stewardship of land. Provide a mentor network of farm collaborators. Provide a mentor network of farm collaborators. This would be a 2-yr apprenticeship program to train 5 to 7 farmers a year. At the end of their second year the farmers would have the opportunity to work at new satellite farms within in region. Satellite farms under consideration would be Community College, local hospitals and corporate parks in the area that want to have access to fresh produce on-site for CSA programs and/or on-site cafeterias.
22	Agriculture and Open Space	Training and Implementation	GAP Training & Certification for Small Farms	Mid-Hudson – specific location TBD	<p>HVADC is proposing a pilot project to certify ten small farms in Good Agricultural Practices (GAP). GAP provides a way for farmers to reduce microbial contamination on their farms and to improve food safety systems. GAP is a critical element of a farm’s ability to sell product directly to supermarket chains, school systems and other institutions, restaurants and distributors. It is anticipated it will soon be a requirement at farmer markets in the region. By achieving GAP certification, these farms will enhance their market opportunities and manage economic risk by reducing potential for food related illness to originate at the farm thus leading to economic sustainability.</p> <p>HVADC is proposing to partner with Cornell Cooperative Extension, food safety/GAP experts and distributors who have expressed a direct interest in obtaining product from small farms but have been unable to overcome the lack of GAP certification. HVADC has been approached by several distributors who are willing to assist these farms. This interest is a direct result of the growing demand</p>



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23	Agriculture and Open Space	Hudson River foodway corridor	This project supports the economic development of NY agricultural producers statewide and delivers fresh, local NY farm and forest products from the Port of Albany to New York City via barge on the Hudson River.	Lower Hudson – Long Island Resource Conservation and Development Council (RC&D)	<p>for local food in the region.</p> <p>HVADC would like to provide the necessary training and assist the farmers through the certification process to ensure success. Success will be measured in terms of the number of farms which complete the certification and access to at least one new market opportunity in the growing season following the certification.</p> <p>HVADC is at the design stage of this project and has a work scope developed. The training program would be delivered at no cost to the participants, however we believe a 50% cost share is an appropriate responsibility for the farmer to obtain the GAP certification. This model is easily replicable to other regions with proper public and private funding as GAP certification is an industry standard.</p> <p>The Hudson River Foodway Corridor Project envisions a sustainable, regional food distribution system that empowers the farming industry of New York State, provides high quality food to the New York City residents, and revitalizes the Hudson River as the transportation corridor. The Foodway Corridor project has been designated as one of six Marine Highways Initiatives selected nationwide by the US Dept of Transportation in 2010</p> <p>The project and its contribution to sustainability in the region:</p> <p>1. Benefits include:</p> <ul style="list-style-type: none"> Agriculture/Foodsheds – This project supports the economic viability of NY agriculture and increases access to fresh, local foods to New York City residents. Climate Change Adaptation – This project supports climate change adaptation by replacing truck traffic with waterborne transportation. Economic Development – This project supports the economic development of New York State farming communities and those involved in product aggregation and distribution. Energy – This project lessens consumption of fossil fuels by taking trucks off the road and focuses on locally sourced agricultural products rather than those sourced out of State or internationally.

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					Transportation – This project benefits highway infrastructure and reduces traffic congestion in and around New York City by reducing the number of food delivery trucks entering and exiting the NYC metropolitan area. By focusing on New York State producers, this project reduces the amount of food travelling from other states or countries. This will be especially important during and following the planned Tappan Zee Bridge replacement project.
24	Agriculture and Open Space		City of Newburgh, Ulster County/Village of Warwick, Village of New Paltz, Orange County	Groundwork Hudson Valley (Yonkers)	Feasibility study + planning grant for multi-use trail from Yonkers->Bronx
25	Economic Development	New Rochelle Armory	New Rochelle	City of New Rochelle	The project consists of a proposal to rehabilitate and reuse of the former Armory located on East Main Street in New Rochelle to support mixed use occupancy, including as its primary use an indoor open, local, “farm-to-table” market as part of The City of New Rochelle’s ongoing effort to improve the Echo Bay waterfront. The goals of the project are to: 1. Rehabilitate and preserve a historic structure with distinctive architectural features; 2. Activate a currently underutilized site for the public’s enjoyment and benefit; and 3. Complement and enhance the surrounding revitalization of the New Rochelle shoreline.
26	Economic Development	NY Energy Savers: Modular heating plants demonstration	Mid-Hudson Region		Shovel-ready retrofit D3620 modular heating plants to existing houses and collect actual energy usage data to consistently realize an energy savings of 50%. Grew from the 2006, NYSERDA sponsored study of, “The Performance of Integrated Hydronic Heating Systems.”
27	Economic Development	Advocacy for Climate Smart Communities	Mid-Hudson Region		Encourage communities to join Climate Smart Initiative
28	Economic Development	Regional Expansion of the “Green Guru”	Mid-Hudson Region		Expansion of an existing Westchester-based online social network for green leaders and the public

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		Online Social Network			
29	Economic Development	Dover Knolls - Mixed-Use Development and MNR Station	Harlem Valley Psychiatric Center	Dover Knolls Redevelopment Co. II, LLC	Shovel-ready redevelopment of Harlem Valley Psychiatric Center into MNR station and mixed use space (retail/residential/grocery) ; 2.5 million sf; 933 acres
30	Economic Development	Green Technology Training at Community Colleges	Mid-Hudson Region		Building upon existing curricula. According to research by Sustainable Hudson Valley, most MHR counties have a community college with adult/continuing education offerings in green technology training
31	Economic Development	Continuation of the Green Talent Pipeline (through NYS DOL) and similar efforts			Continuation of a NYS Dept. of Labor project from 2009
32	Economic Development	Elementary and Secondary School Sustainability Curriculum	Mid-Hudson Region		Create and market materials for incorporating sustainability into K-12 curricula
33	Economic Development	Daylighting the Saw Mill River, Phase II	Yonkers (Westchester)	City of Yonkers	Daylighting a river and encouraging building owners to reactivate vacant space on upper floors
34	Economic Development	Hudson River Valley Warriors Program	Mid-Hudson Region	Hudson Valley Tourism	Writers and photography fellowship to promote tourism
35	Economic Development	Sing Sing Prison Museum Program	Ossining (Westchester)	Village of Ossining (In cooperation with Historic Hudson River Towns)	Creating an on-site museum depicting the construction and evolution of this historic prison facility
36	Economic Development	Hudson Rising/Floating Green Expo	Hudson River from Harlem 125th St to Albany/Rensselaer	OurHudson, Clearwater	Working ship expo and traveling festival/exhibition
37	Economic Development	Kingston Homeport/Sloop Restoration	Kingston Rondout Waterfront	Hudson River Sloop Clearwater	Repurpose an existing building as a maritime hub including community hall and performance stage

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			(Ulster)		
38	Economic Development	Hudson Valley Food Hub Phase II	Kingston (Ulster)	Hudson Valley Agribusiness Development Corporation	Capital expansion of two food processing and distribution firms currently serving 60 NYS farms
39	Economic Development	Monohk Preserve Foothills Connectivity Project	Ulster County	Mohonk Preserve	The only New Paltz trailhead connecting the Walkkill Valley to the Shawangunk Mountains
40	Economic Development	Hudson Fjord Trail	State Route 9D, Beacon, Cold Spring	Town of Philipstown	Phased implementation of a hike/bike trail with access to Hudson Highlands State Park
41	Economic Development	Catskill Interpretive Center	Shandaken/Mt. Tremper (Ulster County)	The Catskill Center for Conservation and Development	Interpretive/visitor center for Catskill Park and Forest Preserve
42	Economic Development	City of Kingston Multi-Modal Connectivity Project	City of Kingston	City of Kingston	Improve bike/ped facilities in the town by converting abandoned or underutilized railroad corridors and through complete streets strategies along Broadway and Greenkill Avenue.
43	Economic Development	Colony Farm / Catskills-Shawangunk Greenway	Wawarsing	Friends of Colony Farm	Re-purpose the former NYS prison farm in Wawarsing as Catskills-Shawangunk Greenway and hang-gliding site
44	Economic Development	Hudson River Greenway Water Trail	Hudson River from Whitehall (Washington) and Hadley (Saratoga) south to The Battery	Hudson River Valley Greenway	256 mile, 96 site water trail for kayakers and boaters extending from the Adirondack Park and Lake Champlain to Manhattan
45	Economic Development	No Child Left Inside 4-H Program	Mid-Hudson Region	Cornell Cooperative Extension Dutchess County	Providing Underserved Youth in the Mid-Hudson Valley with Environmental Leadership, Teaching, and Outdoors Training through the No Child Left Inside 4-H Program. This project proposes to replicate Cornell Cooperative Extension Dutchess County's (CCEDC) No Child Left Inside (NCLI) program throughout the Mid-Hudson region. CCEDC's current NCLI model trains inner-city high school students from Poughkeepsie to become environmental leaders and works with them to teach their peers and younger youth about the environment, all while

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					getting the youth outdoors and in their community. Students in the program also gain important job and leadership skills.
46	Economic Development	Green Teen Community Gardening	Mid-Hudson Region		Providing Mid-Hudson Valley Youth with Small Farms and Green Job Training through the Green Teen Community Gardening 4-H Program
47	Economic Development	Hudson River Valley Ramble	counties adjacent to Hudson River	Hudson River Valley Greenway and National Heritage Area	Expanding a 13 y/o event with ~200 guided sports (hikes, bikes, walks, paddles), festivals and educational events held annually in the region
48	Economic Development	Kingston Home Port & Education Center	Rondout Creek Waterfront, Kingston	Hudson River Sloop Clearwater, Inc.	a year-round hub for river education that includes winter boat building workshops and seasonal field programs
49	Economic Development	Mid-Hudson Regional Green Business Challenge	Mid-Hudson Region centralized in Westchester County	Westchester Green Business Challenge (WC County Govt & Business Council of WC)	A networking platform that mainstreams green business practices through online/social media tools, including a “scorecard” used to track each member’s environmental performance
50	Economic Development	Mid-Hudson Sustainable Communities Consortium	Mid-Hudson Region	Sustainable Hudson Valley	Regionwide membership network (i.e., Southern Westchester Energy Action Consortium) to coordinate funding, establish compacts, etc.
51	Economic Development	River Cities Sustainability Education Program	Mid-Hudson Region	Hudson River Sloop Clearwater, Inc.	performing youth empowerment and environmental science education programming; working with leaders in at-risk environmental justice communities
52	Economic Development	Sparrowbush Preserve	Deerpark (Orange County)	Orange County	Provide public access on 18 acres on Delaware River for fishing and boating
54	Economic Development	Tappan Zee Bridge	Rockland County, Westchester County		Push for state funding to examine the implications (environmental, financial, economic, etc.) for implementing the proposed mass transit options being discussed (e.g. train, bus rapid transit, etc.)
55	Economic Development	Two-Row Wampum Enactment	Albany to New York City	Neighbors of the Onondaga Nation (NOON)	A series of cultural and educational events highlighting the 400th anniversary of the Two Row Wampum Treaty
56	Economic	Green Lights for	Mid-Hudson	Unknown	To identify priority redevelopment areas, proactively create a plan and perform

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
	Development	Green Sites	Region		much of the SEQR review -- to make the sites more business-ready, becoming "fast-tracked" and predictable places for businesses to build. Additionally, the various agencies that would need to provide approvals (DOT, DOH, etc.) could conduct pre-review.
57	Economic Development	Town of Hyde Park - Commercial Hub Improvement Program (CHIP)	Town of Hyde Park	Town of Hyde Park	Supporting reinvestment in our decaying commercial hubs. Public investment in this effort could create a pilot public-private redevelopment model for other communities to follow. Read more: http://teamhydepark.files.wordpress.com/2011/09/chip-fact-sheet.pdf
58	Economic Development	Preserving West Point Foundry- A Hudson Valley Historical Asset	Cold Spring, Putnam County	Scenic Hudson Land Trust	The West Point Foundry Preserve contains the largest and most important remains of a 19th-century ironworks on the East Coast. Scenic Hudson is now in partnership with local, private and state efforts to stabilize the most historically significant remains
59	Economic Development	Fort Montgomery Marina Property Revitalization	Town of Highlands, Orange County	Scenic Hudson Land Trust	To secure the former Fort Montgomery Marina property in order to create a park with several potential amenities including a boat launch and kayak rental, including 1,000 feet of open, accessible riverfront.
60	Economic Development	Monroe Village Hall	Village of Monroe, Orange County	Village of Monroe	The Village wishes to construct a LEED-certified building to house Village offices, meeting room, justice court, and potentially the Public Library.
61	Economic Development	Electric Vehicle (EV) Infrastructure Build-out Demonstration	Mid-Hudson Valley Municipal Parking Facilities, Metro North Railway Stations, NYS Thruway Rest Areas	The Solar Energy Consortium (TSEC)	The installation of approximately 40 two-bay EV charging stations at locations which will provide both charging convenience and technology exposure to a broad group of early-adopters and potential end-users
62	Economic Development	Clover grass lawns	Mid-Hudson Region	Pace University	We would encourage homeowners to substitute pristine "golf lawns" with clover lawns.
63	Economic Development	Porous pavement	Mid-Hudson Region	Pace University	Install porous pavement in municipalities
64	Economic Development	Composting	Mid-Hudson Region	Pace University	Scraps of vegetables should be available to the public for organic fertilizer. Municipalities and grocery stores can publicize the use of composters.
65	Economic Development	Design & Installation of PV Solar Arrays	Kingston, NY and Ulster County	Solartech Renewables, LLC	Two utility scale photovoltaic solar arrays to be developed, designed and constructed in the Mid-Hudson Region for Ulster County and the City of Kingston using local materials and labor

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
66	Economic Development	Bio-solid reduction and Waste Water Treatment	Mid-Hudson Region	Ceres Technologies	To apply mature waste water, bio-solid destruction and water purification technologies to alternative use for NYS projects. Example: apple production and grape processing rendering, brewery/spent grains or Dairy/Yogurt process by-product reduction.
67	Energy	GreeNR	City of New Rochelle	City of New Rochelle	New Rochelle would like to develop a TOD zone around its transit center which is a multi-modal facility serving Metro North, Amtrak, and buses.
68	Energy	Mid-Hudson Data Repository	SUNY New Paltz	SUNY New Paltz, Croton Energy Group + private sector IT partners	Tracking baselines and providing metric updates for sustainability indicators.
69	Energy	NWEAC DR Program	Mount Kisco	NWEAC	NWEAC has entered into a process with Con Edison in Mount Kisco, New York, to install meters on the low and medium voltage distribution system. These meters are cost-effective, because three high-quality meters will capture the real-time consumption of an entire 10 MW distribution loop. When installed, these meters will allow all consumers inside the loop to participate in DR programs for which they are currently ineligible because individually, they are too small. The Mount Kisco location has planned the installation of four separate multi-vehicle charging stations, each of which will be able to charge vehicles dynamically, earning money through demand response provided.
71	Energy	Energy Improvement Districts	Northern Westchester as pilot	NWEAC, SWEAC, etc	Develop demonstration energy improvement districts in each of our regions. Each district will incorporate one (or more) of the following resources/strategies, in a manner that creates synergistic values for all of these technologies/capabilities: renewable generation, energy efficiency, demand response, energy storage, electric vehicle charging, collective energy purchase.
72	Energy	Net Zero Energy District Education Center:	Sullivan County (Liberty, NY)	Sullivan Alliance for Sustainable Development	The project will lead to a replicable model for the region as many building portfolios face the same challenges and all areas have potential for renewable energy integration.
73	Energy	Resource Centers for Sustainable Community: Living and Learning Hubs:	Mid-Hudson Region	Sustainable Hudson Valley	GHG reduction by creating vibrant live/work hubs, prioritizing those near transit, and demonstrating the state of the art in green renovation and local energy.
74	Energy	SUNY New Paltz Bio-Mass Boiler Systems:	SUNY New Paltz	SUNY New Paltz	Use of a biomass boiler is estimated to potentially reduce the campus CO2 emissions by 20-34%.
75	Energy	SUNY New Paltz	SUNY New Paltz	SUNY New Paltz	An expanded system is estimated to potentially reduce total campus CO2

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		Expanded Photovoltaic Systems:			emissions by 45%.
76	Energy	Sustainable Energy Planning and Security in the Mid-Hudson Region:	Mid-Hudson Region	Clearwater and other NGO and local gov's	Demonstrate the reliability of solar with storage, reduce energy costs and impacts for these pilot communities, assuring that emergency services of participating municipalities have reliable back up power
77	Energy	Green Street Lighting Upgrades for Mid-Hudson Municipalities:	Mid-Hudson Region	Pound Ridge Partnership and other Municipalities:	Lighting upgrades deliver expected 50%-90% energy savings.
78	Energy	Sustainable Operations for Safety	Mid-Hudson Region	Clearwater and Solar Advantage Solutions	As proposed by Hudson River Sloop Clearwater and Solar Advantage Solutions, the SOS project looks to install PV systems with sufficient battery storage to power emergency services in 7 to 10 pilot municipalities in the Mid-Hudson Region. These projects will address climate resilience by assuring reliability in an emergency, while providing distributed renewable energy to significantly reduce the participating municipalities' energy costs in non-emergency day-to-day operations. This project will essentially create an electricity island that can come off the larger disrupted transmission and distribution system by switching to local generation or stored energy instantly if needed.
79	Energy	Engineered Heating Systems for New and Existing Buildings:	Mid-Hudson Region	Energy Application Associate	When the proper heating plant is retrofitted to existing homes, it is possible to consistently realize an energy savings of 50% when measured against the previously installed heating system.
80	Energy	Expanding "Energize New York" to the Mid-Hudson Region	Mid-Hudson Region	NWEAC/Energize	An expanded ENY will have positive regional impacts in the areas of job creation, community development, economic growth, energy independence, GHG reductions and more.
81	Energy	Trees for EEHVR:	Mid-Hudson Region	Hudson Valley Regional Council and Partners	Create replicable models for implementation and long term maintenance of optimal urban tree cover, addressing: appropriate tree species; placement; integrating tree decisions with solar energy siting potential to optimize energy benefits; and building municipal capacity for effective tree maintenance, including prioritizing management of existing trees that are currently saving energy and providing other ecosystem services.
82	Materials	Alternative Fuel	Rockland County	Rockland County	Feasibility study project to investigate siting a pilot co-generation facility for

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
	Management	Generation Project		Solid Waste Management Authority	anaerobic digestion to process food and yard waste into compost, while producing renewable natural gas.
83	Materials Management	Building Material Reuse Facility (B-MRF)			A Building Material Reuse Facility (B-MRF) is proposed to facilitate reuse of building materials and reduce C & D debris exported to landfills. The facility would receive materials primarily from contractors that are rehabilitating or demolishing structures, although they would be open to the public. The B-MRF facility would capitalize on the emerging trend of 'deconstruction', which is a process of dismantling buildings in a manner that conserves the function/use of the existing materials, furniture, appliances, etc., thus allowing for their reuse. The B-MRF would target higher-value materials that may be sold and reused and would not focus on materials typically processed and recycled at C & D debris facilities – an existing example is the Build It Green program in NYC.
84	Materials Management	New Technology Demonstration Program	Mid-Hudson Region		In partnership with a local university, this proposal seeks to conduct a new technology demonstration project. The demonstration project would solicit proposals from technology providers to complete a side-by-side trial of new demonstration-scale materials management solutions. This would provide a proving ground for local clean technology start-ups as well as an opportunity to public evaluate the costs and benefits of new technologies for use at a larger-scale in the Mid-Hudson Region.
85	Materials Management	Integrated Solid Waste System Feasibility	Mid-Hudson Region	Hudson Valley Regional Council	A feasibility study would examine the present status of solid waste management, private and public.
86	Materials Management	Intermodal/Rail Transfer Station	Rail Corridors in Region	NYS DOT, Private Entities	The project proposes an intermodal transfer station to facilitate the distribution of MSW, recyclables, biosolids, ash, and/or other materials by rail.
87	Materials Management	Landfill Feasibility Study	Mid-Hudson Region	Hudson River Sloop Clearwater, Inc.	This project would address the concept and feasibility of siting one or more landfills within the seven county region.
88	Materials Management	Love Em and Leave Em	Mid-Hudson Region	NA	Promote and implement management practices for collection and removal of non-woody yard materials.
89	Materials Management	Organics Recovery Facility	Mid-Hudson Region	Ulster County Resource Recovery Agency - Hudson Valley Regional Council	Reproduce or scale up Ulster County's Organic Recovery Facility

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
90	Materials Management	Region 3 materials Management Administration	Mid-Hudson Region	NYSDEC-Region 3	Development of an inclusive regional materials management planning process
91	Materials Management	New industrial composting facility	Northern Dutchess County	Cornell Cooperative Extension Dutchess County (CCEDC)	Facilitating a state-of-the-art, regional, industrial composting facility for the Northern Dutchess region, using anaerobic digestion for energy production
92	Materials Management	Increasing Household Recycling Rates	Dutchess County and Mid-Hudson Valley Region	Cornell Cooperative Extension Dutchess County (CCEDC)	<p>The regional network of Cornell Cooperative Extension (CCE) associations is proposing to implement a household recycling assessment and outreach project for the Mid-Hudson Region. There is approximately 280,000 tons of municipal solid waste generated in Dutchess County each year, and the estimated rate of recycling in the county is approximately 23%, much lower than the national average of approximately 34%. Licensed haulers can now haul recycled materials to a brand new single-stream recycling facility in Beacon, NY owned by ReCommunity, which processes recyclable materials from throughout the region. Many residents have not been informed about the change to the single-stream process. Several recent studies have called for better education of residents, schools, institutions and companies to increase Dutchess County and the Mid-Hudson Valley's recycling rates.</p> <p>CCE will first assess the level of knowledge of recycling options and habits of Mid-Hudson Valley residents, and identify barriers to recycling through a social science survey. Working with the Cornell Waste Management Institute and county coordinators, CCE educators will then recommend various policy options to increase recycling rates, and develop targeted outreach to municipalities, institutions and residents. This project will contribute to sustainability in the region by improving recycling rates and reducing the use of energy to haul or incinerate trash. There is strong possibility that the project can be replicated to other regions of NYS through close collaboration with Cornell University and regional Extension networks. CCE program outcomes are tracked through development of logic models and continuous evaluation. Cornell University would be responsible for ongoing maintenance of the tools that are developed, and made available via extension websites.</p>
93	Materials	Increasing	Dutchess County	Cornell	The regional network of Cornell Cooperative Extension (CCE) associations is



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
	Management	Household Composting Rates	and Mid-Hudson Valley Region	Cooperative Extension Dutchess County (CCEDC)	<p>proposing to implement a household composting assessment and outreach project for the Mid-Hudson Region. There is approximately 280,000 tons of municipal solid waste generated in Dutchess County each year. It is unclear what the rate of composting is in the county, but the rate is very low. Several recent studies have called for better education and outreach to residents, schools, institutions to increase Dutchess County and the Mid-Hudson Valley's composting rates. Currently, there are 4 large composting facilities permitted by the NYS DEC in Dutchess County, with several more municipal and educational facilities in operation. There is currently no county or regional program to increase household composting rates. Cornell Cooperative Extension, in collaboration with the Cornell Waste Management Institute, provides research-based education and demonstration of household composting methods. CCE Dutchess County maintains an active compost demonstration site, and provides training through its Master Gardener Program. Other New York counties offer Master Composter Certification through CCE.</p> <p>CCE will first assess the level of knowledge about composting methods and habits of Mid-Hudson Valley residents, and identify barriers to composting through a social science survey. Working with the Cornell Waste Management Institute and county waste coordinators, CCE will then recommend various policy options to increase composting rates, and develop targeted training for residents. CCE will also provide training through its Master Gardener Program, and develop a new master Composter Program. This project will contribute to sustainability in the region by improving composting rates and reducing the use of energy to haul or incinerate biodegradable waste. This project can be replicated to other regions of NYS through close collaboration with Cornell University and regional Extension networks. CCE program outcomes are tracked through development of logic models and continuous evaluation. Cornell University would be responsible for ongoing maintenance of the tools that are developed, and made available via extension websites and other mechanisms</p>
94	Materials Management	Regional Composting Opportunities and NYS Correctional Facilities	Mid-Hudson Region	Hudson Valley Pattern for Progress	Expand existing on-site prison composting operations to include community-generated food waste.

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
95	Materials Management	Shopping Center/Retail Procurement Initiative	Mid-Hudson Region	Planning Units	Feasibility study, implantation and monitoring of environmentally preferable purchasing (EPP) and packaging reduction initiatives
96	Materials Management	Demolition Debris Legislation	Mid-Hudson Region	NA	Development of a model ordinance or local law on required demolition debris reuse, for subsequent consideration by County planning units or municipalities.
97	Materials Management	Transitioning from NIMBY to YIMBY	Mid-Hudson Region	Hudson Valley Regional Council	conduct region wide online opt-in contests that discover who may actually want to proactively host MSW facilities in their communities, in exchange for a host community benefit to secure a project
98	Materials Management	Newburgh Food Waste Processing	Newburgh		The project proposal is to make use of empty lots and abandoned industrial buildings in the indicated area to create a compost production and distribution facility for the city of Newburgh. The compost production facility should take as input a) all food waste from the restaurant development on Front Street, b) all grass clippings, leaves and woody debris collected by the City of Newburgh, c) food and kitchen scraps from a (new) residential food recycling program to be instituted in Newburgh, d) food waste from schools, colleges and other institutional cafeterias in the City, e) hops waste from local breweries. The compost production facility can use water from the Hudson in its compost cooking processes. The resultant compost/soil amendment can be used in a) any city owned property as a landscaping amenity b) as a low-cost product to be sold to significant Newburgh tenants, such as SUNY for landscaping purposes and c) as a retail product for sale in the region.
99	TLULC	Bike Lane/Path	Pleasantville, Westchester County	Pleasantville CAC	Creating a bike lane/ path connecting center of Pleasantville with Briarcliff-Peekskill Trailway, Pace University Pleasantville Campus, and Graham Hills Park.
100	TLULC	Putnam Rail-to-Trail Transit Connector	Yonkers, Westchester County	Groundwork Hudson Valley (Yonkers)	Feasibility study + planning grant for multi-use trail from Yonkers->Bronx
101	TLULC	Trail to the Train	Village of Millerton, Town of Northeast, Dutchess County	Village of Millerton/ Town of Northeast/Town of Amenia	Extending Harlem Valley rail trail
102	TLULC	Expand Broadband	Mid-Hudson Region		Facilitate telecommuting and telelearning - converted trips

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103	TLULC	Congestion Pricing	Mid-Hudson Region		Congestion pricing in NYC has the potential to generate revenue that could be used for transit projects in the Mid-Hudson Region.
104	TLULC	Encourage the use of Tax Increment Financing	Mid-Hudson Region		Pass laws that give municipalities and developers more leeway to use Tax Increment Financing (TIF)
105	TLULC	Goldens Bridge Pedestrian Improvements	Hamlet of Goldens Bridge, Town of Lewisboro, Westchester County	Town of Lewisboro	Construction of sidewalks, crosswalks, and other ped-friendly improvements at the intersection of route 35 and route 138
106	TLULC	Local Sidewalk Improvement Incentive Program	Mid-Hudson Cities, Villages, and Town Centers	Local (non-State) government agencies	Create an incentive program for municipalities to repair and improve sidewalks
107	TLULC		Eastchester, Westchester County	Eastchester Environmental Committee	Punch through cul-de-sac to create through path for walkers/riders
108	TLULC	Fishkill Mixed Use Housing Development	Former Dutchess Mall		The project proposal is to repurpose the abandoned mall to create a mixed-use, mixed-income walkable community with commercial amenities. The concept is based somewhat on the Village Homes community in Davis, CA. It would combine affordable housing units with mid-priced units with a few higher priced units on the upper and first floors. The residential units could be up to 4 stories. This must be a walkable community, integrating key amenities into the plan. Amenities would include a small grocery store/farm market, a gym, a play field/park, a child-care center, a community room, a library/Internet work hub, a CSA, bus transportation to Fishkill proper and to the local theatre just to the north and, finally, a community composting operation for food waste and agricultural and yard waste.
109	TLULC	Pedestrian	Hyde Park,	Town of Hyde	Inventory and analyze sidewalk system/ improve sidewalk system

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		Improvements	Dutchess County	Park	
110	TLULC	Pedestrian Improvements	Rhinebeck, Dutchess County	Village of Rhinebeck	Repair sidewalks, create crosswalks, improve access to schools
111	TLULC	Somers Business District Sidewalks	Somers, Westchester County	Town of Somers	3 miles of sidewalk and bike lanes
112	TLULC	Mahopac Branch Trail	Somers, Lewisboro, Westchester County	Town of Somers	Create a bike/ped trail along the Mahopac Branch of the Harlem Division railroad to facilitate bike commuting to the Goldens Bridge station
113	TLULC	Promote and improve the infrastructure of the Old Croton Aqueduct	Old Croton Aqueduct	Rivertowns Tourism Board and municipalities in the Rivertowns	The rivertowns and their tourism board would like to improve the signage at locations where the Old Croton Aqueduct trail crosses streets. This would be done along with an advertising campaign to advertise the Aqueduct as a tourist destination and also as a way to get around between the towns.
114	TLULC	Mid-Hudson Center for Sustainable Learning			The proposed Mid-Hudson Center for Sustainable Learning would provide a venue for offering training to citizens, planners, and elected officials who would like to learn how to implement smart growth. The Center could also provide other education programs that teach the public to live in more sustainable ways. For example, the Center could provide classes that teach urban, suburban, and rural youth and adults how to grow healthy foods for good nutrition, how to start and sustain natural resource-based businesses, how to access open space such as nearby parks, or how to ride and maintain a bicycle. The Center could also administer or operate as a clearinghouse for other programs that encourage sustainable transportation or land use patterns, such as carpooling programs that help commuters link up with one another to share rides, etc
115	TLULC	Climate Planning Circuit Riders	Generic	Gilmour Planning LLC	Underwriting municipal & private planners to advance climate planning
116	TLULC	Generic Environmental Impact Studies for Designated TOD and LED Areas	Mid-Hudson Region		To attract private investment such as TOD or LED, local governments should coordinate to establish a revolving loan fund to finance Generic Environmental Impact Studies for areas targeted for TOD and LED. The loan fund would allow local governments to develop station area or sustainable neighborhood development plans as Generic Environmental Impact Studies with sufficient detail and analysis to obviate the need for project-specific environmental impact

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					statements. Developers benefitting from such studies would then be charged a pro-rata amount for the cost of such studies and their payments used to discharge the loan. These repayments could then be used to fund other studies in other municipalities. Such a financing mechanism would streamline the development review process and favor projects consistent with the objectives of this Plan.
117	TLULC	Local Sustainable Development Demonstration Projects	Five Mid-Hudson Communities	Pace University, Land Use Law Center	Assist five communities in the region reduce their GHG emissions. These communities will serve as demonstrations for other communities to learn from.
118	TLULC	Restore a Prime Environmental Educational Resource in the Hudson Valley		Scenic Hudson Land Trust	Building environmental learning center
119	TLULC	Setting the Foundation for Sustainability: Comprehensive Plan Components	White Plains, Westchester County	Pace University, Land Use Law Center	Create a Land Use Law Center to prepare model sustainability components to assist local governments in drafting local comprehensive plans
120	TLULC	Training to Reduce GHG and Energy Use and Adapt to Climate Change Through Land Use Strategies and Consensus-Based Decision-Making	Mid-Hudson Region	Pace University, Land Use Law Center	Conduct a Land use Leadership Alliance Training Program in each of the region's seven counties to establish a leadership infrastructure to support the implementation of sustainable development projects.
121	TLULC	Amenia Hamlet Sewer Project	Amenia, Dutchess County	Dutchess County Water and Wastewater Authority/ Town of Amenia	Alternative sewer treatment system
122	TLULC	Preserving West Point Foundry	West Point Foundry	Scenic Hudson Land Trust	Stabilizing, maintaining, preserving property

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123	TLULC	Quassaick Creek Multi-Purpose Conservation Corridor	Newburgh, Orange County	Newburgh Community Land Bank (Madeline Fletcher)	Re-orienting neighborhoods around creek/ creation of riparian corridor
124	TLULC	The Roundout Valley- Building A Sense of Place	Rosendale to Mamakating, Sullivan County	Roundout Creek Watershed Council and Via Associates	Create an organization to bring together stakeholders to formulate one unified vision and strategy for the Roundout Valley watershed and create a sense of belonging
125	TLULC	Bike sharing/ solar panels/ invasive species	White Plains	Milagros Iecuna	Milagros would like us to look at these issues
126	TLULC	Market Street Conversion & Pedestrian Improvements	Poughkeepsie, Dutchess County	City of Poughkeepsie	Create a two-way street and improve pedestrian infrastructure
127	TLULC	Future Use/Re-Use of Taconic DDSO Site	Amenia, Dutchess County	Town of Amenia/ Taconic Development Disabilities Service	Re-using the vacant DDSO campus for a TOD project, educational institution etc
128	TLULC	U.S. Lace Curtain Mill Factory	Kingston, Ulster County	Rural Ulster Preservation Company	Adaptive re-use of abandoned factory to low income housing
129	TLULC	"Bus Plus"	Ulster County	Ulster County Planning Department (Dennis Doyle)	Signal preemption for transit systems on congested routes
130	TLULC	Paved shoulders with share the road signs	Mid-Hudson Region		Making bicycling safer on highways.
131	TLULC	Tappan Zee Bridge Intermodal Transfer Station/Connector	Tappan Zee Bridge eastern toll plaza/Tarrytown, Westchester County	MTA/Village of Tarrytown	Create a people mover connecting passengers from buses crossing the TZB to the MNR station. The project would include a moving walkway and pedestrian corridor to accommodate reverse peak commuters.

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132	TLULC	Transportation Management Systems Implementations	Mid-Hudson Region	Ed Robin	Implement Traffic Management Systems in heavily traveled areas and corridors in the region to reduce congestion
133	TLULC	State program to support alt-fuel trucks	Mid-Hudson Region	Ed Robin	State subsidy or incentive program to encourage companies to switch their truck fleets to alt-fuel vehicles
134	TLULC	Green Growth Corridor Revitalization & Infrastructure Retrofit	Mid-Hudson Region	Gilmour Planning LLC	Revitalizing select high-order suburban edges of urban cores
135	TLULC	Hamlet Plans & Updates	Mid-Hudson Region	Gilmour Planning LLC	Updating and reinforcing smaller-scale and rural plans
136	TLULC	Health Impact Assessment	Mid-Hudson Region	Gilmour Planning LLC	Underwriting detailed assessment of public health impacts for alternative capital investments and development programs
137	TLULC	Open Space Plans	Mid-Hudson Region	Gilmour Planning LLC	Underwriting open space planning
138	TLULC	Parking Policy Reform	Mid-Hudson Region	Gilmour Planning LLC	Reforming surface parking and design standards in zoning laws
139	TLULC	Redevelopment Analysis	Mid-Hudson Region	Gilmour Planning LLC	Underwriting municipal & private planning for district and area unit impacts for existing or proposed build out alternatives
140	TLULC	Transit District Zoning	Mid-Hudson Region	Gilmour Planning LLC	Establishing model transit zoning
141	TLULC	GreenNR- New Rochelle's sustainability plan	New Rochelle, Westchester County		GreenNR is New Rochelle's adopted sustainability plan. It appears as if they are asking for some level of funding but make no specific request.
142	TLULC	Pedestrian and bicycle safety improvements in the Village of New Paltz	New Paltz, Ulster County		The implementation of physical design features that will enhance civic life in - from environmental sustainability to economic prosperity, and, of course, most importantly: protect lives.
143	TLULC	LEED certification for transportation projects	Mid-Hudson Region		Awards for high scoring projects in terms of environmental production

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144	TLULC	Taxes for Transit Operations	Mid-Hudson Region		Ballot initiatives to raise taxes for transit operations.
145	TLULC	Develop regional business clusters	Mid-Hudson Region		Based on synergistic materials use - reduce transport distances.
146	TLULC	Regional events to discuss the idea of redeveloping Hudson Valley cities with existing infrastructure and rail lines	Mid-Hudson Region		Discussions about integrating improved mass transit, using all modes, and more intelligent land use focused on directing growth to existing centers.
147	TLULC	Program to encourage bicycle parking at employers	Mid-Hudson Region		Program would provide incentives to employers for providing bicycle racks, showers, and lockers to encourage bicycle commuting.
148	TLULC	New Rochelle TOD Smart Growth Study	City of New Rochelle	City of New Rochelle	The project is to create a vibrant transit oriented development zone around the New Rochelle Transit Center, leveraging the city's transit assets to provide improved access to housing and jobs locally and regionally. New Rochelle's location makes the city ideally positioned for transit-oriented development providing location advantages with proximity to the employment centers of New York City, Stamford and/or White Plains, and the surrounding region.
149	TLULC	Small Town Sustainability Action Plan Handbook	Red Hook	Town of Red Hook Conservation Advisory Council	Red Hook would like to create a "Small Town Sustainability Action Plan Handbook" based off of its experiences implementing the town's Energy Climate Action Plan. The handbook would cover sustainability initiatives, their benefits, implementation challenges, etc.
150	TLULC	Expansion of Park and Ride lots	Mid-Hudson Region		Park and Ride lots are immediate short term actions that have a direct impact on reduction of emissions and can be applied in the more rural areas of the Region.
151	TLULC	Program to encourage the use of Transfer of Development Rights (TDR) to direct growth towards centers	Mid-Hudson Region		Program would encourage the transfer of development rights using existing laws from sensitive environmental areas to priority growth centers and transit-oriented development.
152	TLULC	Make better	Generic and		Build affordable housing close to job centers and close to transit; make buses

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		connections between jobs and homes	Tarrytown, Westchester County		more attractive to take with more and faster service ¹ or make sure key cross-county links are made—for example, build the “Tarrytown Connector”, a bus rapid transit link between Rockland County and the Tarrytown train station.
153	TLULC	Kingston Intermodal Facility	Kingston, Ulster County		This new public transportation facility would serve regional and local transit operators including Kingston CitiBus, Ulster County Area Transit (UCAT), Adirondack-Pine Hill Trailways, Coach USA-Shortline, and Laidlaw.
154	TLULC	Install real time bus information at bus stops	Mid-Hudson Region		Adding transit rider amenities like bus arrival countdown clocks can encourage commuters.
155	TLULC	Dedicated bus lanes	Mid-Hudson Region		Counties consider more dedicated bus lanes.
156	TLULC	Flexed bus service	Mid-Hudson Region		Tied to employers and jobs - specific shuttles to major employers such as schools and hospitals large stores - modal choice.
157	TLULC	Shared services	Mid-Hudson Region		Ulster County tried this without success but between local highway, county and state DOT we are running over each other to plow roads. Providing more incentives to get to shared services would be great and would reduce deadhead miles.
158	TLULC	Traffic Management System Implementation	Mid-Hudson Region		Implement Traffic Management Systems in heavily traveled areas and corridors in the region to reduce congestion
159	TLULC	Allow crossroad development that includes necessary services	Mid-Hudson Region		Shorter trip length for essentials
160	TLULC	Create car/van pools and clubs	Mid-Hudson Region		Includes seniors and schools - increased passenger count
161	TLULC	Reduce VMT by employees	Mid-Hudson Region		Competition sponsored by the local Chamber of Commerce with annual recognition of any innovative company idea that reduced VMTs by employees.
162	TLULC	Double track west shore CSX	Along the CSX Corridor		More freight capacity less yard time
163	TLULC	Designate and create better truck routes	Mid-Hudson Region		Create passing zones, improve turning radii, loading docks - etc. - safer and reduced emissions, requires the use of smart way shipper info - epa - http://www.epa.gov/smartway/partnership/shippers.htm tracking tool for emissions
164	TLULC	Central Avenue Bus	Westchester		The Central Avenue BRT Project, sponsored by the Westchester County



#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		Rapid Transit	County		Department of Transportation, involves building a 14.4 mile express bus route along NYS Route 100, connecting major destinations in the Region including: Downtown White Plains, the Westchester County Center, Cross County Shopping Center, Yonkers Raceway, NYC Subway, and other Westchester Bee-Line bus routes. The project will include intelligent transportation systems, such as traffic signal priority at most intersections and queue jump lanes at selected intersections, preferential roadway treatments, and attractive bus stations with shelters, real-time arrival information, low floor boarding, and off-board fare collection. These features could reduce travel times by 16 to 37 minutes one way, or 25-35 percent, generating ridership increases of up to 35 percent. The project is estimated to cost \$32.79 million over several years
165	TLULC	Cluster Development	Mid-Hudson Region		Shorter road system
166	TLULC	Replace on-street parking with bus/bike lanes	Mid-Hudson Region		There is much talk about conversion of travel lanes for bus/bike lanes but parking can more easily be mitigated. Many large dense urban areas do not allow parking on the major urban street and dedicate a lane to bus/bikes.
167	TLULC	Snow / ice removal	Mid-Hudson Region		Municipalities are responsible for the snow and ice maintenance for their sidewalks. Public resistance to walking has a lot to do with keeping snow and ice off sidewalks in front of their houses/businesses.
168	TLULC	Increasing pedestrian traffic in Tarrytown	Benedict Avenue, Tarrytown, Westchester County		This is a proposal to extend the sidewalk along the south side of Benedict Avenue from Prospect Avenue to Martling Avenue in Tarrytown. The length of the new sidewalk is approximately 0.2 of a mile. The proposed sidewalk would be maintained by the village of Tarrytown.
169	TLULC	Incentive program or ordinances to allow multiple families to live in single-family residences	Mid-Hudson Region		Program to incentivize builders to retrofit single-family houses for multiple families, and legally allow those families to live in them.
170	TLULC	Program to encourage the use of Purchase of Development Rights (PDR) to protect	Mid-Hudson Region		Program would encourage the purchase of development rights using existing laws from agricultural properties areas and place a conservation easement on them.

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		agricultural land			
171	TLULC	Incentives or ordinances to encourage universal design	Mid-Hudson Region		Would help ensure that future building stock can accommodate the needs of an aging population.
172	TLULC	Create a program to encourage location efficient metrics when siting facilities	Mid-Hudson Region		Location efficient metrics can be used when siting businesses close to freight and centers, or when siting senior centers or other public facilities.
173	TLULC	Hyde Park Wastewater Treatment Options	Hyde Park, Dutchess County		Collaboration with private landowners/developers to look at wastewater treatment options that would allow redevelopment of commercial hubs.
174	TLULC	Harriman Transit-Oriented Development	Harriman, Orange County		A mixed-use community is planned for a 130-acre site adjacent to the Harriman station, proposed by Woodbury Development.
175	TLULC	Freight Systems Planning	Mid-Hudson Region		Study of freight issues in the Region and planning to make the freight delivery system more efficient.
176	TLULC	Suite of TDM and TSM strategies in the Route 17/86 Corridor	Mid-Hudson Region		Implement a suite of travel demand management and transportation systems management strategies to reduce congestion on this corridor as it continues to be upgraded to an interstate highway.
177	TLULC	School Bus of the Future	Mid-Hudson Region		Create a program that retrofits existing school buses with clean fuel engines.
178	TLULC	Harrison Transit-Oriented Development	Harrison, Westchester County		The plan involves 3.3 acres with a parking garage, high-density residential development, and retail stores.
179	TLULC	Fuel efficient buses	Mid-Hudson Region		Invest more funds into retrofitting the existing bus fleet and acquiring more fuel efficient buses.
180	TLULC	Increase urban tree cover	Village of Warwick, City of Newburgh, Village of New Paltz, City of Kingston, Village of Nyack, others		Inventory, map and assess existing street trees; identify existing trees and new planting sites where shading of buildings, cooling of surrounding air (via evapotranspiration), and winter wind buffering provide optimal energy efficiency benefits; implement planting and maintenance program to increase tree cover, including operations and maintenance training for municipal staff responsible for ongoing maintenance.

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
			TBD, Orange, Rockland, and Ulster counties		
181	TLULC	New ranking criteria for TIP projects	Mid-Hudson Region		MPOs should adopt SB 375-type measures when ranking projects on TIP to help achieve regional GHG emissions reduction targets.
182	TLULC	Complete Streets implementation	Mid-Hudson Region		Complete streets law – statewide law, consider the context of each project – must now consider the character of surroundings (demographics, housing, etc.). When areas are not complying, planners will have some teeth. Next step is local initiatives aimed at implementation.
183	TLULC	Catskill Mountain Rail Trail	Ulster & Delaware Railroad Corridor City of Kingston to Town of Shandaken	Ulster County	The <i>Catskill Mountain Rail Trail</i> (CMRT) project in Ulster County will upgrade the former Ulster & Delaware (U&D) Railroad corridor into a non-motorized recreational trail. The project will focus initially on developing the CMRT within the City of Kingston and connecting Kingston neighborhoods to the Ashokan Reservoir, where the CMRT would run westward along the length of the Reservoir. Subsequent phases of the project could extend the CMRT a total of 38-miles from Kingston to the Delaware County border.
184	TLULC	Adopting rural road standards	Mid-Hudson Region		Current subdivision road standards are by far too wide and more controlled by fire departments than planning boards. Reduced installation and maintenance costs/ environmental benefits. Requires connectivity - shorter trip length.
185	Water	Trees for Energy Efficiency	Mid-Hudson Region		Test state-of-the-art tools and methods for increasing tree cover in urbanized areas to achieve energy efficiency, runoff reduction, air quality, carbon sequestration, livability and walkability, job creation, climate adaptation and other benefits. Create replicable models for implementation and long term maintenance of optimal urban tree cover.
186	Water	Demolition and replanting of empty buildings and parking lots	Mid-Hudson Region		Remove out of use or abandoned impervious surfaces to increase infiltration of stormwater runoff
187	Water	Increases in extent of riparian buffers	Mid-Hudson Region		Increases in extent of riparian buffers
188	Water	Water and Energy Awareness Plan: for Management in Business, Industry and Educational	Mid-Hudson Region		Create programs to educate the upper management of business, industry and education sectors on water use and conservation. In Rockland County the central water corridor is along the Hackensack reservoir system (that provides water for both Rockland and New Jersey), and is a major business and industrial corridor. Tie in with other water quality and management issues and the sharing of water

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		Facilities			between New York and New Jersey.
189	Water	Watershed Management in the Mid-Hudson region	Mid-Hudson Region		Implement a large-scale analysis of existing conditions in the mid-Hudson watersheds, to ensure the most efficient use of federal, state, and county dollars related to water supply. Pair the Watershed Forest Information Management System results with knowledge of field conditions, managers can make an informed assessment for various landscape-scale plans and decisions.
190	Water	Private well replacement	Mid-Hudson Region		Implement a private well replacement program for residences
191	Water	Energy efficient infrastructure replacement	Mid-Hudson Region		Encourage replacement of public and private infrastructure with more energy efficient equipment
192	Water	Aerated Botanical System pilot project	Mid-Hudson Region		ABS (Aerated Botanical System) pilot project - that will demonstrate and advanced wetland treatment system for wastewater (location TBD)
193	Water	Asset Management	Mid-Hudson Region		Asset management, including longer-term capital planning
194	Water	Install potable well for Bedford Village Water District	Bedford Village Water District		Provide a groundwater source for 1500 residents in this town who's current supply has been contaminated
195	Water	Create a River/Reservoir Friendly Landscaping Program	Mid-Hudson Region		Promote sustainable landscaping and gardening in the region building off of successful programs in Chesapeake Bay and San Francisco
196	Water	Promote rain barrels	Mid-Hudson Region		Capitalize on regional programs already under way that promote rain barrels to use captured rain/stormwater for irrigation and other appropriate uses. Promote "a rain barrel for every downspout"
197	Water	Universal Metering	Mid-Hudson Region		Implement universal metering to promote water conservation
198	Water	Leak detection	Mid-Hudson Region		Implement leak detection programs to reduce water losses in infrastructure
199	Water	Water conservation programs	Mid-Hudson Region		Implement water conservation programs such as low flow toilet replacement for commercial users, low flow fixtures for homeowners
200	Water	Promote the building of cisterns where appropriate	Mid-Hudson Region		Capture rainwater to use for irrigation and other appropriate uses

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
201	Water	Culvert Analysis and Resizing	Mid-Hudson Region	NYSDEC Region 3	Proposed by NYSDEC Region 3, the Culvert Analysis and Resizing project would examine the Region's culverts and ditches to determine which systems are capable of handling the increased flow expected to occur with climate change. The Region is expected to see an increase in rainfall and major storm events as climate change progresses, and the current system of ditches and culverts is likely unable to handle such an increase in volume.
202	Water	Watershed remediation	Mid-Hudson Region		As a result of this project, local leaders and NYS will be better able to target funds to specific vulnerable locations to protect roadways and other facilities from flooding. This will help ensure cost-effective investment.
203	Water	Clean Aquifers in Consolidated Drinking Water Districts	Mid-Hudson Region		Implement advance septic, remediate contaminated groundwater, acquire open space for watershed management
204	Water	Septic maintenance programs	Mid-Hudson Region		Implement programs to encourage septic maintenance and upgrades
205	Water	Quassaick Creek Multi-Purpose Conservation Corridor, Newburgh's other Waterfront	Town of Newburgh		Concept plans for the lower estuary portion of the creek exist; feasibility of biofiltration of storm water, separation of storm & sanitary drains where possible to relieve COS condition & reduce surges at WWTP are in planning stage. Management Plan for Quassaick Creek Watershed will be completed Fall of 2012.
206	Water	Fall Kill Green Corridor	Fall Kill		The Fall Kill Plan prepared by Clearwater has identified a number of project sites and includes stream daylighting, constructed wetlands, and green infrastructure
207	Water	Stormwater wetland treatment	Mid-Hudson Region		Ecological stormwater wetland treatment to capture 80-90% of the loading into the lake at Wappinger's Falls
208	Water	Poughkeepsie Underwear Factory Demonstration Project	Fall Kill Creek Underwear Factory	Clearwater and Design Dynamics	In 2013, Clearwater, Inc., Design Dynamics, LLC, Hudson River Housing, and other partners will construct a green infrastructure system at site of the historic Underwear Factory, adjacent to the Fall Kill Creek in the heart of the City of Poughkeepsie. The system will incorporate permeable pavement, modified tree pits, and a bio-retention area to capture and treat stormwater from the .75 acre site. The project will create new public green space along the creek with educational signage, which will complement the mixed-income housing and community space slated for the building, creating a sustainability hub in a distressed neighborhood
209	Water	Green Infrastructure	Mid-Hudson		Reduce flows of stormwater to combined sewer overflows using green

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#	Working Group	Project Title	Project Location	Sponsor Organization	Project Description
		Implementation in the Hudson Valley	Region		infrastructure in the following cities: Kingston, Newburgh, Poughkeepsie, Saugerties and Yonkers (cities with CSOs in the region).
210	Water	SUNY New Paltz Green Infrastructure	New Paltz		Green Infrastructure Installation (Proposed in the 2012 Campus Sustainability Plan). Will include education, collaboration with community and school, and water quality monitoring.
211	Water	Get municipalities involved in green infrastructure	Mid-Hudson Region		Enable more green infrastructure projects within municipalities by removing cost and knowledge barriers.
212	Water	Gray water projects	Mid-Hudson Region		Reduce stormwater runoff and increase stormwater reuse
213	Water	Green infrastructure in River Cities = Cleaner water and greener cities	Mid-Hudson Region		Incentivize green infrastructure by setting a goal for the region. For example 20% (of projected stormwater flow annually to be handled by green infrastructure)
214	Water	Community Based Website to Calculate Stormwater Footprint	Mid-Hudson Region		Use a stormwater footprint calculator with Google earth so homeowners can see their individual footprint and compare to community average
215	Water	Separate stormwater from sewer systems	Mid-Hudson Region		Separate stormwater from sewer systems in cities that have CSOs
216	Water	Green Infrastructure to Improve Watershed Resiliency in the Saw Mill Brook Watershed	Saw Mill Brook Watershed		Throughout this project, two tenets in the Hudson River Action Agenda, watershed management and climate change adaptation, will be pursued through an integrated approach: implementation and monitoring of green infrastructure and stormwater management practices to improve watershed resiliency to climate change and flooding while improving water quality and restoring watersheds
217	Water	Black Creek Corridor Climate Change Mitigation and Recreational Access Project	Black Creek Corridor	Scenic Hudson	The Black Creek corridor – located in the Towns of Lloyd and Esopus in Ulster County – contains seven ecologically valuable properties that are currently available for purchase by New York State, comprising over 1,300 acres that are identified in the New York Open Space Plan (the state’s blueprint for land acquisition). Permanent protection of these lands also helps to ensure clean drinking water, recreational opportunities for paddlers on the creek and hikers who contribute meaningfully to the Hudson Valley’s \$4.3 billion tourism economy. Conservation of these lands would complement and build upon the

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					State's acquisition and establishment of the Black Creek State Forest in 2011.

D Additional Resources



Additional Resources

This Appendix contains a list reference material compiled with the goal of aiding in implementation of the Plan. This is not meant to be an exhaustive list of resources or bibliography, nor was all of the material used in the creation of the Plan. The resources listed in this Appendix contain additional detail and information that can help inform local decision makers, interested parties, or those tasked with implementing the Plan on behalf of their organization or municipality. For more information on local planning efforts in the Region, please refer to the county planning department's website listed below.

- Dutchess County Department of Planning and Development: <http://www.co.dutchess.ny.us/countygov/departments/planning/plindex.htm>
- Orange County Department of Planning: <http://www.orangecountygov.com/content/124/1362/default.aspx>
- Putnam County Department of Planning, Development, and Public Transportation: <http://www.putnamcountyny.com/planningdept/>
- Rockland County Department of Planning: <http://co.rockland.ny.us/planning/>
- Sullivan County Division of Planning and Environmental Management: <http://co.sullivan.ny.us/Departments/DepartmentsNZ/PlanningandEnvironmentalManagement/tabid/3225/default.aspx>
- Ulster County Department of Planning: <http://www.co.ulster.ny.us/planning/>
- Westchester County Department of Planning: <http://planning.westchestergov.com/>

Additional resources can be found on the websites of the non-County Consortium members:

- Center for Research, Regional Education & Outreach: <http://www.newpaltz.edu/crreo/>
- Pace University Land Use Law Center: <http://www.law.pace.edu/landuse>
- New York Council of Nonprofits: <http://www.nycon.org/>
- Northern Westchester Energy Action Consortium: <http://www.nweac.org/>
- Southern Westchester Energy Action Consortium: <http://www.sweac.org/>

Materials Management

- NYSDEC, 2010. Beyond Waste: A Sustainable Materials Management Strategy for New York State. <http://www.dec.ny.gov/chemical/41831.html>



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- Ulster County, 2009. Ulster County Annual Recycling and Municipal Solid Waste Report Data. <http://www.ucrra.org/recycling/graphstats.htm>
- Westchester County, 2011. Annual Report <http://www.westchesterda.net/2011annualreport.pdf>
- NYSDEC, 2012. Division of Solid & Hazardous Materials, Annual Planning Unit Recycling Report – All County Planning Units.
- EPA, 2009. Sustainable Materials Management: The Road Ahead. <http://www.epa.gov/smm/vision.htm>
- Sustainable Materials Management Coalition, 2012. Sustainable Materials Management – A New Materials Hierarchy, Solutions to Barriers, and Recommendations for a Path Forward. http://www.michaeldbaker.com/documents/smm_final_report.pdf
- EPA, 2008. Planning for Natural Disaster Debris. <http://www.epa.gov/osw/conserves/imr/cdm/pubs/disaster.htm>
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Agriculture and Open Space

- Glynwood, 2010. The State of Agriculture in the Hudson Valley. <http://www.glynwood.org/publications-multimedia/state-of-ag/>
- Northeast State Foresters Association, 2007. The Economic Importance and Wood Flows from New York’s Forests. http://www.dec.ny.gov/docs/lands_forests_pdf/economic.pdf
- American Farmland Trust, 2004. Agricultural Economic Development for the Hudson Valley. http://www.farmlandinfo.org/documents/29796/Hudson_Valley_AED_Complete_Technical_Report.pdf
- Rondout Valley Growers Association: www.rondoutvalleygrowers.org
- Scenic Hudson: www.scenichudson.org
- Cornell Cooperative Extension- Agriculture and Food Systems Programs <http://www.cce.cornell.edu/Ag/Pages/default.aspx>



- United States Department of Agriculture- Agriculture Census: <http://www.agcensus.usda.gov>
- Sullivan County Farm Network: <http://www.sullivancountyfarmnetwork.org/>
- Sullivan County Department of Agriculture: <http://co.sullivan.ny.us/Departments/DepartmentsNZ/PlanningandEnvironmentalManagement/Agriculture/tabid/3257/default.aspx>
- Dutchess County Agriculture and Open Space: <http://www.co.dutchess.ny.us/CountyGov/Departments/Planning/16864.htm>
- Orange County Department of Planning- Agriculture Division: <http://www.orangecountygov.com/content/124/1362/1462/4632/default.aspx>
- Putnam County Department of Agriculture and Farmland Protection Board: <http://www.putnamcountyny.com/agboard/>
- Rockland Farm Alliance: <http://www.rocklandfarm.org/>
- Ulster County Farm Bureau: <http://www.ucfbny.org/>
- Ulster County Department of Planning: <http://www.co.ulster.ny.us/planning/>

Economic Development

- NYS 2100 Commission, 2013. Recommendations to Improve the Strength and Resilience of the Empire State's Infrastructure. <http://www.rockefellerfoundation.org/uploads/files/7c012997-176f-4e80-bf9c-b473ae9bbb3.pdf>
- Scenic Hudson. Securing New York City's Foodshed Plan. <http://www.scenichudson.org/files/u2/scenic-hudson-farmland-case-statement.pdf>
- Patterns for Progress, June 2011. Housing the Hudson Valley: A Discussion Brief on the Future of Housing Policy, Markets and Growth. http://www.upstatehouse.com/view/full_story/14430626/article-Housing-the-Hudson-Valley-Report-Examines-Future-of-Policy--Markets--and-Growth-in-Region
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- Mid-Hudson Regional Economic Development Council, September 2012. Focus on the Future: Progress Report. <http://regionalcouncils.ny.gov/mid-hudson/091712/progressreport>
- CRREO, SUNY-New Paltz, Spring 2010. Regional Well-Being. Finding Agreement in the Mid-Hudson Valley: How We're Doing, Where We're Going - Economy, Environment and Quality of Life. <http://www.newpaltz.edu/crreo/rwb/>



- The Hudson Valley Focus, 2011. The Economic Impact of Tourism in New York. <http://www.rocktourism.com/images/pdf/NYS-Tourism-Impact-Hudson-Valley.pdf>
- New York State Department of Labor, Division of Research and Statistics. New York State Green Jobs Survey: Report for the Hudson Valley Region. <http://www.labor.ny.gov/stats/green/hudsonvalley.pdf>
- Hudson Valley Agribusiness Development Corporation, October 2008. Comprehensive Economic Development Strategy.
- The Dyson Foundation/Marist Poll, 2012. Many Voices, One Valley survey <http://www.manyvoicesonevalley.org>
- Glynwood's Keep Farming Program: <http://www.glynwood.org/programs/keep-farming/>
- Our Hudson: <http://www.ourhudson.org>
- American Planning Association, Economic Development Division: <https://www.planning.org/divisions/economic>
- Green Guru Network: <http://www.greengurunetwork.com>
- Sustainable Hudson Valley: <http://www.sustainhv.org>
- CRREO: <http://www.newpaltz.edu/crreo/>

Energy

- IRC, 2009. State of Markets Report. www.isorto.org
- NYISO, 2012. Load and Capacity Data Gold Book. www.nyiso.com
- NYISO, 2012. Reliability Needs Assessment. www.nyiso.com/public/about_nyiso/fundamentals_of_planning/reliability_planning/index.jsp
- NERC, 2012. Summer Reliability Assessment. www.nerc.com
- US Census, 2012. American Community Survey. Fact Finder. www.census.gov
- NYSERDA, 2012. Energy Data and Prices. www.nyserda.ny.gov/Energy-Data-and-Prices-Planning-and-Policy/Energy-Prices-Supplies-and-Weather-Data.aspx
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- NERC, 2013. Peak Demand and Energy Projection Bandwidths: 2004-2013 Projections. www.nerc.com
- NYISO, 2012. Power Trends. www.nyiso.com
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- U.S. Department of Energy, 2012. Database of State Incentives for Renewables & Efficiency. www.dsireusa.org
- Energize New York: <http://energizeny.org>
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- Energy Improvement Corporation: www.energyimprovementcorp.org
- Local Energy Aggregation Network: www.leanenergyus.org
- New York Renewable Portfolio Standard: www.nyserda.ny.gov/Program-Planning/Renewable-Portfolio-Standard.aspx
- New York State Public Service Commission: www.dps.ny.gov
- Property Assessed Clean Energy: <http://pacenow.org>
- Regional Greenhouse Gas Initiative: www.rggi.org
- State and Local Energy Report: www.stateenergyreport.com

Land Use, Livable communities, and Transportation

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E Selection of Watershed Management Plans



Table E.1 contains a selection of existing watershed management plans in the Mid-Hudson Region. Note that this is not a comprehensive list, and that not all of the documents or efforts listed below constitute a watershed management plan in the strictest sense.

Table E.1 Watershed Management Plans		
Plan Title	Geographic Coverage	Link
Hudson River Estuary: Action Agenda 2010-2014	Watersheds that drain to the Hudson from the Troy dam to the Verrazano Narrows.	http://www.hudsonwatershed.org/plans09/hreaa2010.pdf
Orange County Water Master Plan, 2010	Orange County	http://waterauthority.orangecountygov.com/county_plans.html (Not strictly a watershed management plan)
Delaware River Basin Commission - Special Protection Waters Program	Delaware River Basin	http://www.state.nj.us/drbc/programs/quality/spw.html
Delaware River Basin Commission - Interstate Water Management Recommendations	Delaware, New Jersey, New York State, New York City, and Pennsylvania	http://www.state.nj.us/drbc/library/documents/regs/GoodFaithRec.pdf
A Watershed Management Plan for the Fall Kill, Dutchess County	Fall Kill Watershed in eastern Dutchess County and the City of Poughkeepsie	http://www.hudsonwatershed.org/plans09/fallkill.pdf
Moodna Creek Watershed Conservation and Management Plan	Moodna Creek Watershed in Orange County, NY	http://waterauthority.orangecountygov.com/moodna.html
Wallkill River Watershed Conservation and Management Plan	Wallkill River in Sussex Co, NJ and Orange and Ulster Counties in NY	http://www.hudsonwatershed.org/plans09/wallkill.pdf
Glenmere Lake Watershed Plan	Glenmere Lake Watershed in the Towns of Chester and Warwick, NY	http://waterauthority.orangecountygov.com/glenmere.html
Quassaick Creek Watershed Management Plan	Quassaick Creek Watershed in Orange and Ulster Counties	http://waterauthority.orangecountygov.com/quassaick_watershed.html
Indian Brook-Croton Gorge Watershed Plan	Westchester County	http://www.hudsonwatershed.org/plans09/indianbrook.pdf
Upper Esopus Creek Management Plan	Covers Pine Hill, Phoenicia, Panther Mountain and Boiceville	http://www.hudsonwatershed.org/plans09/esopus.pdf
Natural Resource Management Plan for the Wappinger Creek Watershed	Wappinger, Poughkeepsie, Dutchess County	http://www.hudsonwatershed.org/plans09/wappinger.pdf



Table E.1 Watershed Management Plans

Plan Title	Geographic Coverage	Link
Lower Esopus Reconnaissance Study	The Lower Esopus Creek from the Ashokan Reservoir to the Hudson River	http://www.loweresopus.org/downloads
Casperkill Assessment Document	Town of Poughkeepsie, Dutchess County	http://www.townofpoughkeepsie.com/planning/stormwater/2009/Health_of_the_Casperkill.pdf
Lower Non-Tidal Rondout Management Plan	Rochester, Warwarsing, Ellenville Village, New Paltz Rosendale, Marbletown	http://www.clearwater.org/green-cities/watershed-management/rondout-creek-watershed-council/#rondout
Tri-State Watershed Management Plan	Delaware, New Jersey, Pennsylvania, New York	http://www.nj.gov/drbc/programs/subbasin/tris-tate/index.html
Bronx River Memorandum of Agreement	Bronx River Watershed	http://www.hudsonwatershed.org/imas.html
Ramapo River Watershed Intermunicipal Council MOU	Ramapo River Watershed, Orange, Rockland (NY), Bergen and Passaic (NJ)	http://www.hudsonwatershed.org/plans09/ramapo.pdf
Rondout Creek Watershed Agreement	Rondout Creek Watershed, Ulster County	http://www.hudsonwatershed.org/plans09/rondout_creek_agreement.pdf
Saw Mill River Watershed Agreement	Saw Mill River Watershed, Westchester County	http://www.hudsonwatershed.org/plans09/sawmill.pdf
Wappinger Creek Watershed Intermunicipal Agreement	Wappinger Creek Watershed, Dutchess County	http://www.hudsonwatershed.org/plans09/wappinger_watershed_agreement.pdf

F Sample Reporting Template



Mid-Hudson Regional Sustainability Plan Indicator Report

County:				Reporting Section:	
Year:					
Indicator	Value	Time Period	Source	Contact Information/Location of Source	Notes
Date:		Author Signature:			Author Name:
Contact Information:					

