

Sacketts Brook Sustainability Center Redevelopment Proposal

A Transitional Green Technology Park, Innovation Center & Business Incubator - *Revision 1k*

The following document presents a Transition Town / Putney Energy sponsored project in Putney VT.

What is Transition Putney?

Transition Putney was formed in 2010 by members of the community to help address and respond to the triple challenges, and opportunities of Peak Oil, Climate Change and Financial Instability.

Transition Initiatives are groups of people in community (lots of examples online here:

<http://www.transitionnetwork.org/initiatives/map>) working together to look at these challenges and address this BIG question:

"For all those aspects of life that this community needs in order to sustain itself and thrive, how do we significantly increase resilience (to mitigate the effects of Peak Oil) and drastically reduce carbon emissions (to mitigate the effects of Climate Change) while providing a better life for our residents?"

During past <http://transition.putney.net/index.php?ID=30> Open Space Events and meetings, several key intersecting projects and goals were outlined.

1. Creation of community garden and greenhouse space.
2. The creation of common land for <http://en.wikipedia.org/wiki/Permaculture>, natural building, bio-remediation, and other relearning practices.
3. The establishment of a Putney Farmers Market location for year- round use.
4. Local investment, sustainable business growth, building community, art space.

We looked at locations for these projects and found that one place had all the right aspects and features;

The Old Basketville Village lands located near the center of Putney Village. This 6.5-acre parcel is a key part of downtown with road and stream frontage. The site is well situated with plenty of solar access, open space and access to flowing water for irrigation or heating and cooling systems. The land is flat, well drained and has several buildings that are in reasonable shape, the parcel has a large potential parking garage or storage structure and three phase electricity on site. Putney already enjoys high-speed Internet access. The site is a previous industrial area, appropriately zoned for light manufacturing.

Our goals;

- Revitalize downtown Putney while encouraging Transition practices of building a more resilient, more self-sufficient community.
- Create a low impact multi-use development within our village center designed to minimize the regions environmental impact by fostering green businesses along with educational and community-based partnerships that model a strong commitment to the environment.
- Provide space for centralized food storage and processing, farmers markets, common and green spaces, permaculture, and possibly affordable housing.
- Establish a business incubator that will attract green companies, specializing in renewable energy, recycling & reuse, green building design and other green products, to provide needed jobs, LOIS style.
- Include all available renewable energy technologies to offset the conventional energy needed for heating and cooling. This would include co-generation or combined heat and power systems as a part of the picture.
- Build community and provide an educational framework for workshops and hands-on training for renewable energy, re-skilling, bio remediation and green building.

What is an Eco-park? - "A system of planned and managed materials and energy exchanges that seeks to minimize energy and raw materials use, minimize waste, and build sustainable economic, ecological and social relationships."

This eco-park can be showcase of agricultural, technological and educational opportunities for our local community, with the "hands-on" approach to sustainable technologies and practices.

A Green Eco-Park in Putney will provide employment while showcasing advanced passive and active solar design, green building technologies, best practices for building reuse, environmental remediation techniques, green rooftops, net zero construction, permaculture design along with other cutting-edge and old-world practices.

What is a business incubator? - http://en.wikipedia.org/wiki/Business_incubator - programs designed to accelerate the successful development of entrepreneurial companies through an array of business support resources and services, developed and orchestrated by incubator management and offered both in the incubator and through its network of contacts. Incubators vary in the way they deliver their services, in their organizational structure, and in the types of clients they serve.

Technology Incubation - Technology Incubators now account for around 40% of all Incubators in the United States with a similar proportion in other nations. Business incubators can be private or public. Private incubators are for-profit firms that take equity or receive a fee for the business services they provide to their clients. In essence, they are a consulting firm that specializes in new firm creation and support. Since the 1980s, many developed and developing countries have set up systems of public business incubators to encourage and assist entrepreneurship. In many cases, public incubators are focused on high-tech industries. This project will require a mix of public and private investments.

Since is difficult for startup businesses to survive, (many fail in the first 5 years 64.2% fail in 10 years), tech incubators can ensure a better survival rate for new businesses. More than 80% of incubated companies are profitable within two years and are still doing business by the end of five years.

Green Technology incubation

<http://www.thinkvermont.com/publications/pdf/VTIncubatorReport-2-03.pdf>

Simply put: Clean or Green Energy Incubators identify new clean technologies, often at the idea or proof-of-principle stage and provides the resources for them to grow into self-sufficient companies. Green and Clean Tech incubators are exploding across the country and the world. Try a Google search for "Green Technology Incubation" you should find a wealth of resources and projects. Investments in Green Tech have tripled in the past year. Often these organizations are using re-modeled existing buildings; Green Tech is the future, and offers solutions to climate change and other post oil effects.

http://www.ewea.org/fileadmin/ewea_documents/documents/publications/WD/WD24vi_Oil.pdf.

Other Vermont based technology incubators

<http://www.vermonttechnologies.com/>

http://www.vttechcouncil.org/partners_vcet.html

Green tech examples: <http://choose2bgreen.com/> and <http://www.nrgsystems.com/>

Sustainability is critical - By using all of the latest technologies, incorporating shared heating power systems we can provide the possibility of competitive low costs for new businesses offering local jobs within the community. By creating jobs *and* homes, we can eliminate some of the transportation costs and energy usage involved in commuting to other towns for work. By going green and net-zero, we can eliminate the rising cost of energy in the project and thus not burden the future occupants.

http://en.wikipedia.org/wiki/Sustainable_design

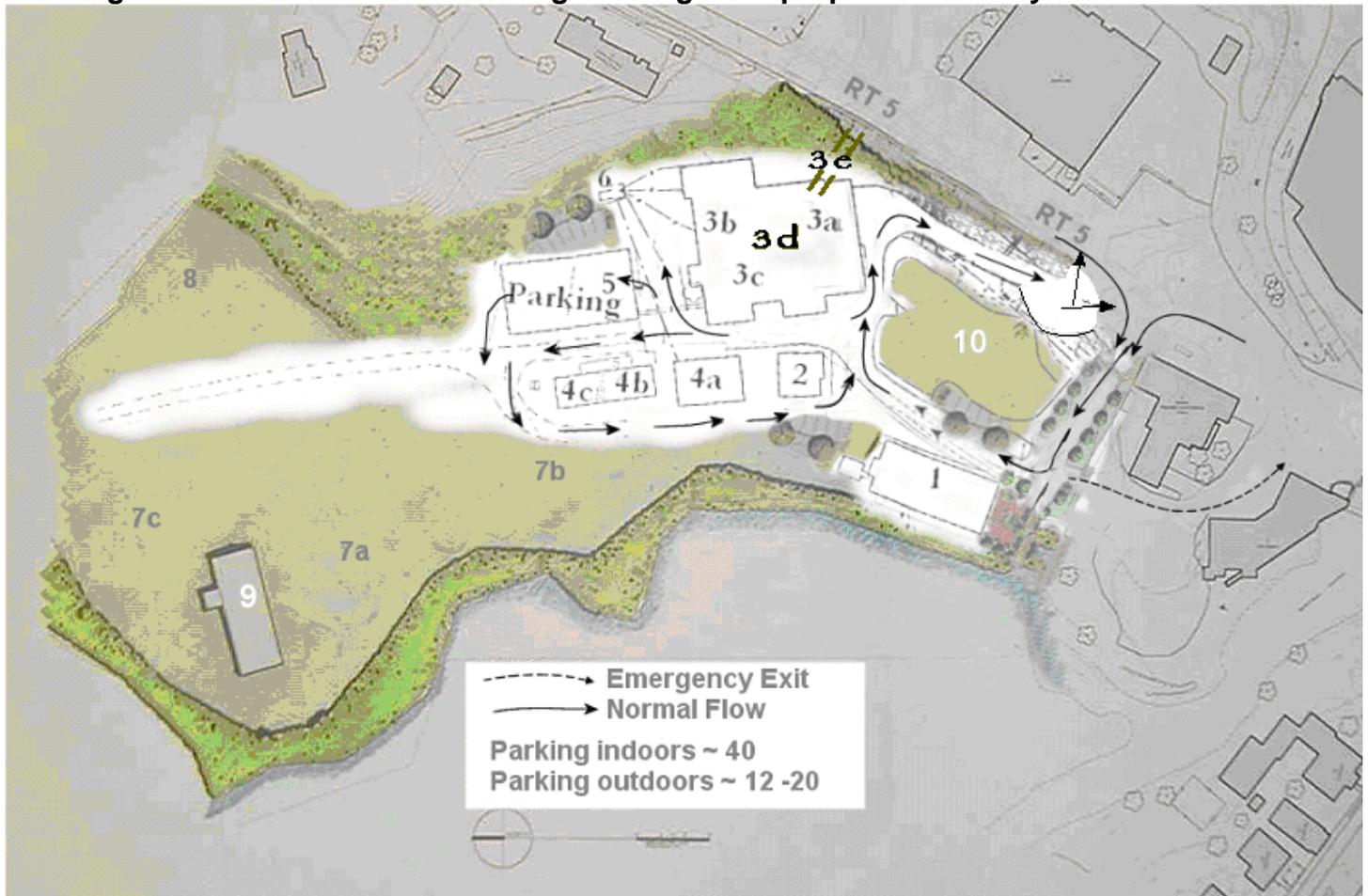
In effect, we can make it attractive for new and existing businesses to move into the Eco-Village, and the ground swell of green energy businesses will have a synergistic effect. This will benefit the town, providing jobs, taxes, and a vibrant business community of green development companies, farmers markets and other appropriate ventures. See page 6.

Advantages of a Business Incubator combined with an Eco Park – Providing an infrastructure for the growth of green companies will foster emergent technologies, in much the same way that the Marlboro Grad Center has provided a technology incubator for local graduates to create Internet startup companies; by sharing the technology and the infrastructure. Our focus is on sustainability, food, health, art and energy. The long-term goal is to create a supportive environment that fosters the growth of community, green space, green design and green energy companies while providing attractive jobs, and offering our community a valuable opportunity to shape our future, grow food and learn how to do it all with less carbon.

Basketville Village - Existing problems;

- The existing property is an EPA designated Brownfield; <http://www.epa.gov/brownfields/index.html> in need of remediation.
- Site is adjacent to wetlands, which comprise the water recharge aquifer for the Town of Putney's municipal water system. This area must be protected.
- Limitations on growth and restrictions on business or commercial space limit what activities should take place at this location.
- Putney needs more housing but Putney also needs more mid to high paying jobs. Simply creating housing will cause the lack of jobs to be a greater problem, and simply creating more jobs (or retail space) will exacerbate the existing housing problems.

Building locations - MAP of the existing buildings and proposed one-way traffic flow.



Proposed building usage

There is a SLIDE SHOW here;

<http://projects.putney.net/basketville/slideshow/Basketville.html>

with information available online at on the forums here; <http://myvermont.org/phorum/list.php?3>.

Below is the building structure list with building numbers and usage suggestions. If we decide to keep all the buildings, this is an example of what could be done with them.

1. Waterfront restaurant space, artist studio space, mushroom house or garage space. – The building next to Mtn Paul's.
2. Office space for site administration or other functions.
- 3a. This is the Main Building south – (now used for Basketville seconds sales) it has the most potential uses;
Art space and commercial retail, farmers market, office space, your use here!
- 3b. Office space / production facilities.
- 3c. Office space / production facilities.
- 3d. Second story on main building for office or living space.
- 3e. Possible footbridge from RT5 sidewalk to the green roof and the rest of the project.
- 4a, b, c. Net-Zero Housing ~ 5 to 10 small units- Middle row, northern two or three buildings (away from paper mill!). More housing is possible with new construction. These buildings would be used as the foundation structure, with the spaces between the buildings filled in to create one long set of (multiple family) living spaces, complete with roof top day-lighting, staggered but adjoining walls, with windows east and west.
5. Parking Garage for the entire complex. Existing siding and roofing would be replaced, internal structure kept as is. The floor is a concrete pad, and the construction is steel I beams, perfect for parking and storage.
6. Wood chip fuel Co-generation plant for heat and energy for entire complex – behind main building.
- 7a. Open field for concerts, public venues, park space, etc.
- 7b. Possible location for new housing units, Solar thermal, garden space or other uses.
- 7c. Section of field in flood plain – possible community solar project.
8. Link to other parcels (wetlands, central school forest) with a foot-path for bird watching and other wildlife viewing
9. Rear carriage house (open building with lots of sun and a big roof) - Used for town fair, circus, farmers market, storage, public shows, and concerts. 24Kw Solar PV electric energy system, (on the roof) could power many buildings in the complex.
10. *Solar Energy Park with a 35Kw PV parking canopy, front and center on traffic circle. See Appendix E (link) for details.*

Other details of this Project

Co-Generation

In addition to all of the renewable energy sources, a central co-generation plant would provide electricity and heat for the entire complex, (this would be primarily for heat and electric backup if needed). Energy usage by the entire project would be monitored for study and billing.

A public kiosk will allow the public to view the energy produced by all the solar electric systems, and provide information on other sources of energy, in addition to providing historical information about the original Basketville village uses and building layout.

Traffic patterns

To eliminate the possibility of traffic congestion, the larger roadways in this development are designed to flow one way (see map diagram above), with the main entrance near Mountain Paul's, and the main Exit, just north on RT 5. This uses the existing roadways and ensures an easy ingress and outlet, while maintaining a flow of traffic clockwise.

Parking lot and on street parking

A building sufficiently large enough to handle all or most of the parking is available on site, (Number 5 on the map above). Additional parking would be in front of existing buildings and around the "traffic circle" surrounding the "Solar Energy demonstration Park".

Financing

We are seeking financial support for this project and welcome all ideas. We welcome any suggestions and opportunities for grants. We welcome information about other funding sources available for green projects.

Funding Options

Incubators can have many investment partners in addition to universities, local and state governments and private investors. Since new firms require finance to grow, incubators need to have close relationships with many kinds of investors. Seed capital (http://en.wikipedia.org/wiki/Seed_capital) and venture capital (http://en.wikipedia.org/wiki/Venture_capital) funds, business angels (http://en.wikipedia.org/wiki/Business_angel), and banks generally provide most of the seed and start-up capital for incubated companies. Since business incubators are powerful tools (http://en.wikipedia.org/wiki/Economic_development), they collaborate actively with regional and national government agencies, from which they often receive financial grants. Evaluations of business incubators in Europe and the U.S. suggest that 90% of incubated startups were active and growing after three years of operation, which is a much higher success rate than that observed in startups launched without assistance. (This discrepancy may partially be due to the thorough selecting process of firms that are allowed entry to an incubator.)

Priority Funding Options – we are working on

We believe in a crowd funding and the local investment model.

- Crowd funding information from Transition Culture; <http://transitionculture.org/>
- Renewable energy investment notes from New Generation Energy <http://newgenerationenergy.org/invest/renewable-energy-investment-notes>
- Local stock options
- Community Solar

Other Sources of Funding and News

In addition to community funding, block grants, private loans and gifts, here are a few informational links to look into. <http://www.veda.org/interior.php/pid/3/sid/14/nid/23>
<http://www.cbc.ca/canada/story/2007/07/05/technology-grants.html>
http://weblog.infoworld.com/sustainableit/archives/2007/03/ceo_group_makes.html

What can you do to help - get involved!

The most important factor here is community involvement and vision. By creating a community project we become part of the "relationship" of the development *to* our town. This is not just some real estate to be developed; it is a vital part of our town. We can blend economics with the environment and the needs of our town by creating a dynamic community project that puts Putney at the forefront of green technology and sustainable development. Together we can help build a sustainable future.

What else can you do?

Please tell us what you think, and join us in this vision. Please support this project by getting involved. Share your views with others, so people realize they are not alone in wanting a new vision.

Appendix A – Services, and businesses

Attractive services that this incubator could provide to businesses:

1. Below-market costs for business space
2. High speed secure networking and Internet access
3. IT consulting and sales and service (through member companies), which would include the sales and service for low power energy efficient PC/Mac/Linux systems and servers
4. Data Storage space for multiple companies with off-site backup
5. Book keeping and accountant services
6. Entrepreneurial advisory services
7. Physical space for office, manufacturing and construction at below market rates
8. Heating, cooling and electricity provided at below market costs
9. Business development and consulting services, and access to grant funding and startup capital
10. Shared advertising and critical mass of similar businesses
11. Receptionist services
12. Shared facsimile services
13. Printing services for color and black & white printing
14. Shared conference rooms with presentation and video conferencing capabilities and smartboards
15. Shared kitchen / dining facilities

Examples of Green Businesses that would be appropriate at this site:

1. Micro Greens Inc – greenhouse grown local food
2. Mushroom production company
3. Window Quilts sales, service and manufacturing
4. Energy Auditing Services
5. Energy Conservation Services
6. Photovoltaic Tracking manufacturing and system Installers
7. Solar Installation Companies for domestic hot water, space heating and cooling
8. Green Architectural design firms
9. Electric transportation companies
10. E Mowers – Battery Electric Mower conversions and sales
11. Electric Personal Mobility Vehicles
12. Electric assist - skates, skateboards and scooters and electric bikes
13. Skateboard manufacturing (wood working)
14. Micro Hydro Association and energy coop head quarters
15. Affordable lighting company (wholesale to the public)
16. Micro banking association (loan to home owners and businesses for green upgrades and installations).
17. IT consulting (companies for energy companies)
18. Eco Furniture Company
19. Energy Park Inc. - Creators of solar energy and eco parks
19. Farmers market (Sundays)
20. Health club with solar heated pool
21. Holistic Massage and Body work center
21. Pharmacy / Apothecary
22. Recycling and re-use center
23. Hardware Store / Lumber Yard (local woods)
24. Community gardens and Greenhouses
25. Landscaping and bio remediation companies
26. Art Studios

Other non-commercial activities for the site:

27. Publicly accessible green space and waterfront access
28. Pathway connecting school forest to the village center
29. Bike path / nature walk loop
30. Outdoor music concerts (electricity powered by the sun)
31. Craft fair / energy fair / rally space
32. Perm-culture demonstration area and bio remediation demonstration
33. Green Building conferences, and hands on demonstrations.

Appendix B

Businesses and organizations that have expressed interest, or endorse this project:

1. The Windham Energy Group members
2. The Putney Energy Committee
3. Transition Town Putney
4. Post Oil Solutions
5. Coop Power of Southern Vermont
6. Jerry Hiam LLC – Energy Star Home Builders
7. The Vermont Planners association
8. The Vermont Natural Resources Council
9. Southern Vermont Renewable Energy
10. e-Solutions – Energy consulting
11. Dosolutions
12. Evergreen Builders
13. The Draft Detective
14. The Putney Inn
15. Putney Coop

Members of the town government that support this project

16. The Putney Town Manager
17. The Putney Listers office
18. Members of Putney Selectboard
19. Members of the Putney Fire Department

Appendix C - Renewable Technology - Ideas and Solutions to Energy Issues for this site

- 1. Co-generation or district heating** - is the use of a heat engine or a power station to generate both electricity and useful heat. Conventional buildings account for over 35% of the energy used in the developed world. Conventional heating systems use more fuel, even though a project may use LEED certification, using heating oil for each dwelling will consume much more energy than a centralized wood pellet or bio-fuel co-generation system.
<http://en.wikipedia.org/wiki/Cogeneration>
- 2. Passive solar design** - for all units and commercial spaces. Passive design includes small changes such as larger roof overhangs on the south side, direct and indirect solar gain techniques, roof pond systems, trombe walls and other simple technologies that will save money on heating and cooling. Passive solar technologies convert sunlight into usable heat, cause air-movement for ventilation or cooling, or store heat for future use without the assistance of other energy sources. Technologies that use a significant amount of conventional energy to power pumps or fans are classified as active solar technologies. Some passive systems use a very small amount of conventional energy to control dampers, shutters, night insulation, and other devices that enhance solar energy collection, storage, and use. Design changes include buildings that are elongated on an east-west axis can also provide greater solar exposure. By using Passive design the energy costs of the buildings are lowered further than what LEED alone can provide. This will save energy for the life of a project.
http://en.wikipedia.org/wiki/Passive_solar_design
- 3. Day-lighting** (the practice of placing windows and skylights, light tubes with reflective surfaces, so that during the day natural light provides effective internal illumination), this brings in the natural sunlight, even to lower floors, and back rooms. Day-lighting provides healthy lighting for occupants with no ongoing or additional cost.
<http://en.wikipedia.org/wiki/Daylighting>
- 4. Use of automated lighting controls** (called occupancy sensors), which turn on and off lights if there is motion or occupancy, and not enough ambient light. Also we will use motion sensors for exterior lighting. These energy saving technologies are being used in many new buildings for interior and exterior lighting systems and these simple steps will save electricity over the life of the project.
<http://www.ecpzone.com/article/article.jsp?siteSection=0&id=152>
- 5. Use of compact fluorescent and standard LED bulbs** and low voltage [LED interior](#) and [exterior](#) lighting systems in 100% of this project, including the outdoor lights. Outdoor lights are so often overlooked and play a major roll in energy consumption.
http://www.energystar.gov/index.cfm?c=cfls.pr_cfls
- 6. Street lighting** will be LED style (on timers or motion sensors) to use less electricity and not be always on. Streetlights can be PV powered (standalone) so less wiring and underground trenching will be needed. There are several very attractive low standing LED street light systems. LED systems use less than 50% the electricity of conventional lighting.
<http://www.electronicweekly.com/Articles/2005/07/29/35918/dutch+town+illuminated+by+led+street+lights.htm>
- 7. Use of geothermal energy** (heat pumps), to provide cost-effective cooling for your project. Using the ground for cooling is much more efficient than using air conditioning, and provides heat in the winter.
http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12640
- 8. PV Systems** (Photovoltaic) solar electric will provide some portion of the electric needs. **PV collectors** can now be integrated right in the rooflines and often are very attractive. While the most efficient collectors are on trackers that pivot to follow the sun, one can cover more area on a roof and generate as much electricity for lower cost without using trackers. PV will offset energy used for this entire project; it will save electricity over the life of the project.
<http://en.wikipedia.org/wiki/Photovoltaics>
http://www1.eere.energy.gov/solar/pv_systems.html
- 9. Solar hot water systems** and on-demand (tankless) hot water systems for units not serviced by solar hot water systems. These systems can be used together with on-demand as a backup. This will reduce costs, since only a cold water pipe is needed to supply remote bathrooms (less copper pipe), and in other cases where units would only turn on if the water was not heated by sunlight.
http://en.wikipedia.org/wiki/Solar_hot_water
- 10. Solar Cooking** - commercial grade **solar ovens**, solar kettles and hot pots will compliment the shared kitchen space for this project, providing free heat for cooking meals. Home appliances are the world's fastest growing consumers of energy, second only to automobiles. Items such as stoves, ovens, and refrigerators account for 30 percent of electricity use in industrial countries and 12 percent of their greenhouse gas emissions. In the United States, an estimated 5 percent of fossil fuel consumption is dedicated to the cooking and distribution of food.
http://en.wikipedia.org/wiki/Solar_cooking
<http://www.charityguide.org/volunteer/fewhours/solar-ovens.htm>

11. **Green rooftops** - provide a natural solution to large-scale water runoff problems, noise and air pollution, they offer greater insulation from heat and cold while providing a green space that reduces carbon dioxide from man made sources.

<http://www.greenroofs.org>

<http://hortweb.cas.psu.edu/research/greenroofcenter/history.html>

A green rooftop uses a building's roof surface for vegetation, such as sedums or grass, planted on a growing medium over a waterproof membrane. The advantages of green roofs are:

- Green roofs are aesthetically pleasing.
- They reduce city "heat island" effect of any development.
- They reduce carbon dioxide impact of not having green space or trees.
- They reduce summer air conditioning cost by shedding heat that would otherwise be generated by a hot roof.
- They reduce winter heat demand by providing insulation
- They lengthen roof life by two to three times.
- They remove nitrogen pollution in rain thus neutralizing the acid rain effect and can aid in storm water runoff reduction.
- Green roofs reduce noise and can provide green space.
- They can provide songbird habitat and green space for people.

The main building structure would be a prime candidate for a green roof (on top of the second story); it would be accessible from the main street via a walkway, and from the interior of the building through a stairwell and attractive bulkhead. Access to this green space would allow residents, employees and the town's people to utilize a space in the sun near the old growth forest canopy on the adjoining property to the north with long range views to the west.

14. **Green Infrastructure** - <http://www.greeninfrastructure.net/>

This term refers to the fusion of water resource protection and public circulation networks. Elements of the natural landscape-wetlands, wildlife corridors, trees and meadow – all combine together with pedestrian (foot path – trails) and commercial usage to create a green web. This understanding and usage is crucial to the preservation of our wellhead protection and recharge zone. The wetlands provide a vital function for our town and need to be safeguarded.

15. **Rainwater Management - Runoff and other technologies**

http://www.twdb.state.tx.us/publications/reports/RainwaterHarvestingManual_3rdedition.pdf

By using rainwater harvesting, and porous pavement technologies (that allow water to seep into the ground) we can reduce the volume of water and the pollutants in storm water runoff and provide water for use in fountains, or other non-potable uses while protecting the environment. Other techniques include rain gardens with plantings that are designed to soak up water from roofs and other runoff. Specialized plants that absorb salts and toxic runoff are employed to create buffer zones for roadways.

Rain Garden info – <http://dnr.wi.gov/org/water/wm/nps/rg/index.htm>

16 **Gray Water Systems** – <http://www.esd.ornl.gov/programs>

This water reuse technology can alleviate drought conditions for gardens or provide water for other uses, thus reducing the need to use freshwater from the town water system. This will forestall or eliminate the enlargement (and possible disruption) of the water system because of upgrades needed for new developments.

17. **Urban Forestry** - http://www.walkable.org/download/22_benefits.pdf

By planting and increasing the number of trees, along with a myriad of fruit and berry bushes, we can improve the ecological health of this parcel. Trees sequester atmospheric carbon, and reduce energy consumption by providing shade for buildings and homes for wildlife and birds.

18. **Water saving fixtures** - <http://www.epa.gov/OW/you/chap3.htm>

Simple measures can slash water usage and save fresh water. Flushing toilets or needlessly running water wastes about 70% of the total water used in homes and offices.

19. **Automated lighting controls** - <http://www.toolbase.org/Technology-Inventory/Electrical-Electronics/lighting-controls>

Controls can switch lights on and off or dim lights based on input from sensors, which include simple timers, occupancy sensors to detect motion or infrared radiation from a person or photo sensors. These controls operate lights or adjust light levels based on the amount of available daylight. There are also sensors suitable for accessibility that operates lighting by voice or sound. Many systems include the option of remote control via phone, computer, or a standard remote control. All of these will save money and energy by shutting off lights when not in use.

20. **Permaculture** - an approach to designing human settlements and perennial agricultural systems that mimic the relationships found in the natural ecologies. The word permaculture is a portmanteau of permanent agriculture, as well as permanent culture. Also see the Permaculture Association of Teachers and Organizers on WiserEarth for a more-complete US Listing: <http://www.wiserearth.org/group/PATO> and <http://burlingtonpermaculture.googlepages.com/>

Appendix D

Site Real estate listing and documentation

- 6.1+/- acres
- 6 Buildings
- Frontage on Sackett's Brook

This centrally located land parcel with a collection of simple sawmill and concrete block storage and equipment buildings offers an opportunity to be an active participant in the future development of the Putney Village District. Perfect for a creative Planned Residential Development (PRD) or Planned Unit Development (PUD), the site offers access to town sewer and water, paved highway, power and frontage on Sackett's Brook. The recent report, Visualizing Density in Putney Village by the Windham Regional Commission (2005) for the Putney Planning Commission offers extensive information about opportunities for growth in the village. Interested parties are strongly encouraged to review this report. It appears that developers who are aware of and responsive to the desired development patterns may benefit greatly by collaborating with the planning commission and individuals who have participated in the process.

Copies of the report, zoning information and maps are available at the town of Putney Municipal site: <http://www.putneyvt.org/>

Survey: "Property of Basketville, Inc". - Parrish Land Surveying 12/28/89. 355.43' frontage on Rte. 5. 626.23' frontage on Sacket's Brook.

The western edges of the property appear to be in the 100 year flood zone.

Buildings: A complex of buildings and several sheds where wooden buckets and baskets were produced. Town sewer, 3 Phase electric and Drilled well on the property. Town water extends along the frontage to the property. Building #1 - Lumber Dry kiln, storage 1824 sq. ft. concrete block with tar and gravel roof, concrete floor. Building #2 - Sawmill, 1000sq. ft. Open on three sides, gravel floor. Building #3 - warehouse, 5400 sq. ft., concrete floor. Building #4 - Chip storage, 1224 sq. ft., wood siding, metal roof, Building #5 - corrugated metal roof & sides, concrete floor. Building #6 - 192 sq. ft. concrete block, tar and gravel roof, and concrete floor.

The Basketville Village is very appropriate for this kind of development, it has all the critical ingredients; space, sunlight, proximity to town, workforce, water and power to provide a green energy-related technology park.

A web based slideshow (<http://projects.putney.net/basketville/slideshow/Basketville.html>) of the existing property is available online along with additional information on the property, including reports on the Brownfield, population density studies and other information at the PEC forums; (<http://myvermont.org/phorum/list.php?3>)

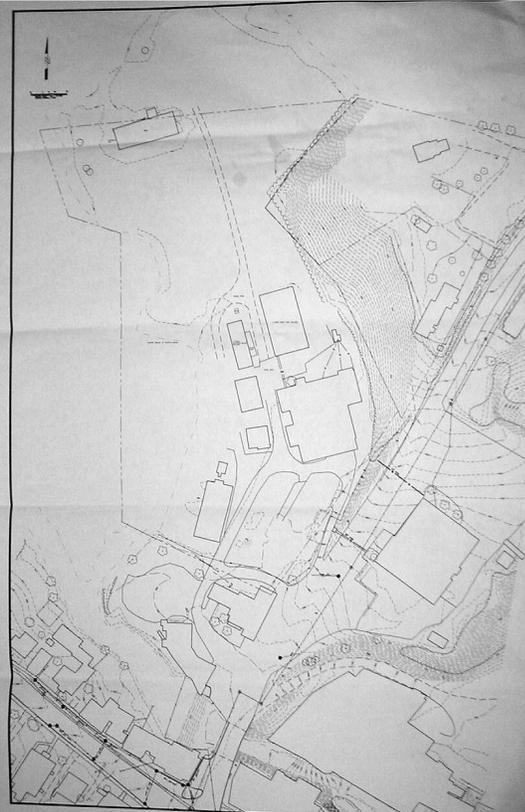
Appendix D continued

Building locations – Aerial view and drawing MAP of the existing site with buildings.

Aerial View



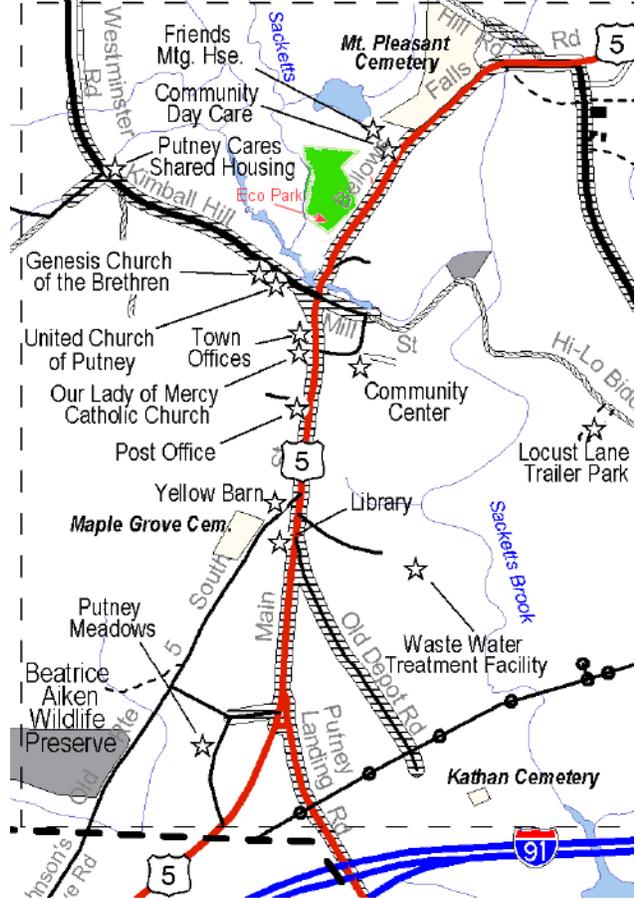
Drawing of parcel



Parcel map (modified in 2012 moving boundary north to water's edge)



Site location map



Appendix E – Solar Energy Park

What is a solar energy park?

Here is one idea http://pec.putney.net/project_detail.php?proglD=2

A solar energy park is a demonstration showcase for renewable energy from the sun.

The location at the southern end of the project can provide enough area for a mixture of technologies, and interactive kiosks for educational use.

The main section of the park would be a PV sheltered parking area for automobiles (and a charging station) that doubles as an electricity source.

Examples here:

<http://greencoastsolarsystems.com/category/pv-products/steel-structures/parking-garages/>

<http://www.solarserver.com/solar-magazine/solar-news/current/2011/kw08/california-utility-selects-envision-solar-for-solar-pv-parking-array-designs.html>

<http://us.sunpowercorp.com/commercial/products-services/solar-parking/>

Solar parking canopies are setting the standard for elevated solar power systems. Ideal for parking lots or open areas adjacent to facilities, these solar PV parking structures generate on-site solar electric power, reduce energy costs and provide premium shading and protection from the weather.

In addition to this large PV array, demonstration solar thermal systems could showcase renewable energy technologies. Solar thermal systems on the buildings could provide considerable heating and possibly cooling, lowering the traditional heating and cooling costs. Kiosks at the park could provide real time readouts of the electric and energy generated, by the arrays and collectors, along the entire complex. Other kiosks would provide historical information of the area, and how Basketville used local materials for their products once manufactured in Putney.

Appendix F - What's next?

1. Formation of business plan
2. Creation of a public good L3C organization or possibly community coop to bring this project to fruition.
3. Seek investor and grant funding
4. Purchase and Sale contract on property
5. Begin work of transformation!

Please join us!

Contact Daniel Hoviss 802 387 2521

Daniel@putney.net

The latest version of this document can also be found online: <http://energy.putney.net/files/docs/eco-park.pdf> and it is best read online to make use of the informative hyperlinks included throughout the document.