



Re-Imagine!
Beaver County

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PROJECTS AND EXAMPLES MENTIONED IN REPORT

Farm Training Glynwood Farms - Eco-Industrial Parks - Trail Towns - Sweetwater, Texas
Ecovative Packaging - Riverwalk, Milwaukee WI - Cape Charles – CRAFT - Logstown Run
Indiana County Sustainable Economic Development Task Force
Indiana County Sustainable Economy Summit II



AN INVITATION

This is a community endeavor, the beginning of a path of positive change. This report is an invitation for readers to consider new approaches to community development and does not represent a comprehensive plan, rather some ideas that can catalyze transformative change for the region.

This presentation begins with a description of how Beaver County might look in the future and then offers a brief history of the Re-Imagine Beaver County initiative. The report then goes into some detail about four major sectors of economic development: Energy Innovation, Green Chemistry and Manufacturing, Sustainable Agriculture, and Riverfront Recreation and Tourism. These four sectors were identified through intensive participatory workshops organized by Re-Imagine Beaver County in March, September and October of 2017 – workshops that involved more than 100 of the county’s citizens who were willing to meet and contribute their ideas for the region’s economic, social and environmental development.

There are visual depictions for each of the sectors of economic development and an example of a catalytic project to inspire community members. A case study about our neighbor, Indiana County, provides a best practice model for Beaver County to take action. And finally, the report concludes with some beginning suggestions for launching sustainable economic development and a green economy task force.

Please read on, and join in this endeavor!



BEAVER COUNTY IN THE FUTURE

A major challenge facing Beaver County, and perhaps all communities across the world, is how to increase local resources and resilience for dealing with significant change as we move further into the 21st century. Beaver County enjoyed a strong economy while its flourishing steel industry sparked development and prosperity. However, with the county primarily dependent on one industry, it is no wonder that the impacts of the decline in U.S. steel production were and still are being felt by its inhabitants. Should Beaver County's economy remain dependent on a few large scale, fossil-fuel based industries, its economic prospects will remain subject to the fluctuations of oil and gas prices, or to decreases in the large-scale demand for the products of those industries as cleaner technologies multiply.

Developing a diversified base of businesses in many different industries around Beaver County is a more resilient and viable strategy. It will expand the base of the current economy and help Beaver County transition to the economy of the future. Investors and grant-makers can provide tools and resources for diversifying local and regional economies in ways that create and sustain quality economic opportunities and high-quality jobs.

Sustainable development is the investment in business, social, built, and natural environments that creates increasing prosperity for all, now and into the future. Improving the quality of jobs is a crucial part of sustainable development. Investments in workforce training and economic development assistance for communities and entrepreneurs can facilitate the transition into a more resilient economy.

As envisioned by the community, the re-invented Beaver County would be one of increased connectivity and mobility, well-equipped to provide for local needs with local means. Waterfront trails would line the banks of the Ohio River, connecting out to the Greater Allegheny Passage and turning inland along streams and creeks like Bradys Run. Rural agricultural development would be regenerated through innovations such as hemp farming (now legal on a limited basis in Pennsylvania). Farming educational and entrepreneurial initiatives could entice young adults to create a new generation of local farmers. Vacant lots in Beaver County's more urban communities would be repurposed to not only celebrate public open space, but to build resilient community networks through grassroots efforts to grow produce, create spaces for sharing art and story, and develop centers for learning and education in sustainable practices. Larger parcels of vacant land along the river would go from brownfields to eco-industrial parks with heat recovery, closed-loop waste systems and green chemistry businesses.



A HISTORY OF RE-IMAGINE BEAVER COUNTY

VISION

We envision a greener local economy as a result of making diversified, equitable and sustainable economic development decisions to create a resilient, healthy, and thriving Beaver County.

MISSION

We are a local grassroots group guided by community visioning of climate conscious economic development strategies. We commit to working with local leadership to promote workforce development and job creation from innovative technologies that emphasize renewable energies and offer a balanced combination of economic, environmental and social benefits to achieve a high quality of life and long-term prosperity for residents of Beaver County.

Re-Imagine Beaver County began as a part of Beaver County Marcellus Awareness Community (BCMAC), a grassroots organization dedicated to educating the community about the impacts of unconventional oil and gas drilling and protecting the environmental assets in the area. BCMAC is also committed to social change in Beaver County to ensure a thriving economic and healthy future for the region. These community members propose that Beaver County's people and land assets can be most highly valued with a commitment to job growth and development in sustainable industries.

Funding and support from the League of Women Voters of Pennsylvania and Beaver County Marcellus Awareness Community provided for a series of workshops held during 2017. The first of three events was held on March 6, 2017, as residents gathered to create a new vision for Beaver County, PA. Participants were encouraged to collectively envision a future based on sustainable development.

Nearly 70 people participated in the first visioning session. Leaders and entrepreneurs of sustainable initiatives started off the event. Speakers included Monaca Borough Manager Mario Leone, organic farm owners Don and Becky Kretschmann, Carl Davidson on the BlueGreen Alliance, Jim Price of Sustainable Pittsburgh, and Hal Saville of Energy Independent Solutions.

After the panel presentations, participants discussed and shared their roundtable visioning responses to the question "What types of sustainable development would you like to see in Beaver County?" On a giant map of Beaver County, break-out groups drew their ideas or wrote them on Post-Its that they affixed to the map; then a few members of each table reported out to the larger group. That process, the ideas it generated, and the wonderful positive spirit of the evening were captured in video (see page 5).

In September of 2017, the community came together again for a “next-steps” second session to re-imagine the region. Working with the same giant maps and the four development sectors identified in March - Energy Innovation, Green Chemistry and Manufacturing, Sustainable Agriculture, and Riverfront Recreation and Tourism - participants brainstormed ways of moving their visioning ideas forward. Two key prompt questions were “What kinds of assets does Beaver County already have to attract clean-economy businesses or create new home-grown initiatives?”, and “What are ways to shift the cultural narrative in Beaver County to include sustainability?” The guest speaker was Dr. Terry Collins, a professor at Carnegie Mellon University who explained how green chemistry offers sustainable manufacturing alternatives by avoiding the creation of hazardous substances in the design and manufacture of products.

The third event, held in October of 2017, focused on taking visions into action. Again, this was a workshop format with speakers to educate and support attendees. Ryan Kieta, a landscape architect and urban designer who helped Johnstown PA develop their Vision 2025 initiative, offered insights into how communities design green economy revitalization strategies and economic development initiatives. Specifically, he explained the importance of creating a formal vision statement, and steering committee, as well as recruiting stakeholders. Preston Shimer, a retired business executive and recent VP of the League of Women Voters of PA Board, shared his perspective, developed from years in serving local government, on how economic development happens in communities. Patty DeMarco, Ph.D. spent her career in the energy and environmental policy industries. As the author of the newly published book *Pathways to Our Sustainable Future – A Global Perspective from Pittsburgh*, she provided a local voice guiding the work groups through a S.W.O.T. analysis and offering tips for how residents can engage in the community development process.

During the year of 2018, Re-Imagine Beaver County volunteers focused on taking the ideas from the community visioning sessions and, with continuing support from the League of Women Voters of Pennsylvania, transforming these ideas into a report presenting a framework for a green economy initiative. Some nominal additional funds were raised to continue with research and modestly compensate student interns from local universities with commitments to sustainable development. Representatives from the Slippery Rock University Sustainable Enterprise Accelerator (SEA) volunteered their time to help the Re-Imagine Beaver County team generate mission and vision statements, and the SEA has also offered their support for the future development of this initiative.



Thank you to the League of Women Voters of Pennsylvania for funding the videotaping of all three of the Re-Imagine Beaver County workshops. Experience the enthusiasm and creativity of the community with this video excerpt:

<https://www.youtube.com/watch?v=eDEvOHcfPu0>



SECTORS OF GROWTH

ENERGY INNOVATION

The Bureau of Labor Statistics of the U.S. Department of Labor indicates that the two fastest growing professions in the country are connected to the Energy Innovation market: 96% to 105% growth in jobs related to solar and to wind power generation. (1) The potential of renewable energy goes beyond the generation of energy itself. In Sweetwater, Texas, the construction and maintenance of windmills has created a new industry in town, with training programs at local schools like the Texas State Technical College. (2) Locally, Pennsylvania recently released from the PA-DEP's "Finding Pennsylvania's Solar Future" program a draft report which identified solar growth scenarios that can yield net economic benefits of over \$25 billion beginning in 2018 through a target date of 2030. (3)

Beaver County's existing infrastructure, the availability of industrial land for development, and the county's privileged location for logistics could make clean energy a viable sector of sustainable economic development. Investments in green infrastructure could have an impact similar to Roosevelt's New Deal, which brought the whole country out of the Depression.

Imagine the potential catalytic effect just a few new solar charging stations could have in key locations along routes used for daily commutes or in destination parking lots for shopping or work. Small projects like these could generate enough capital and enthusiasm for larger ones like revitalizing brownfields along the Ohio River – work that could include updating old industrial buildings into state-of-the-art green-infrastructure manufacturing plants, with green-infrastructure workforce training programs in place at all the schools in the County.

WE WANT TO:
**ENCOURAGE
SMALL SOLAR
PROJECTS**

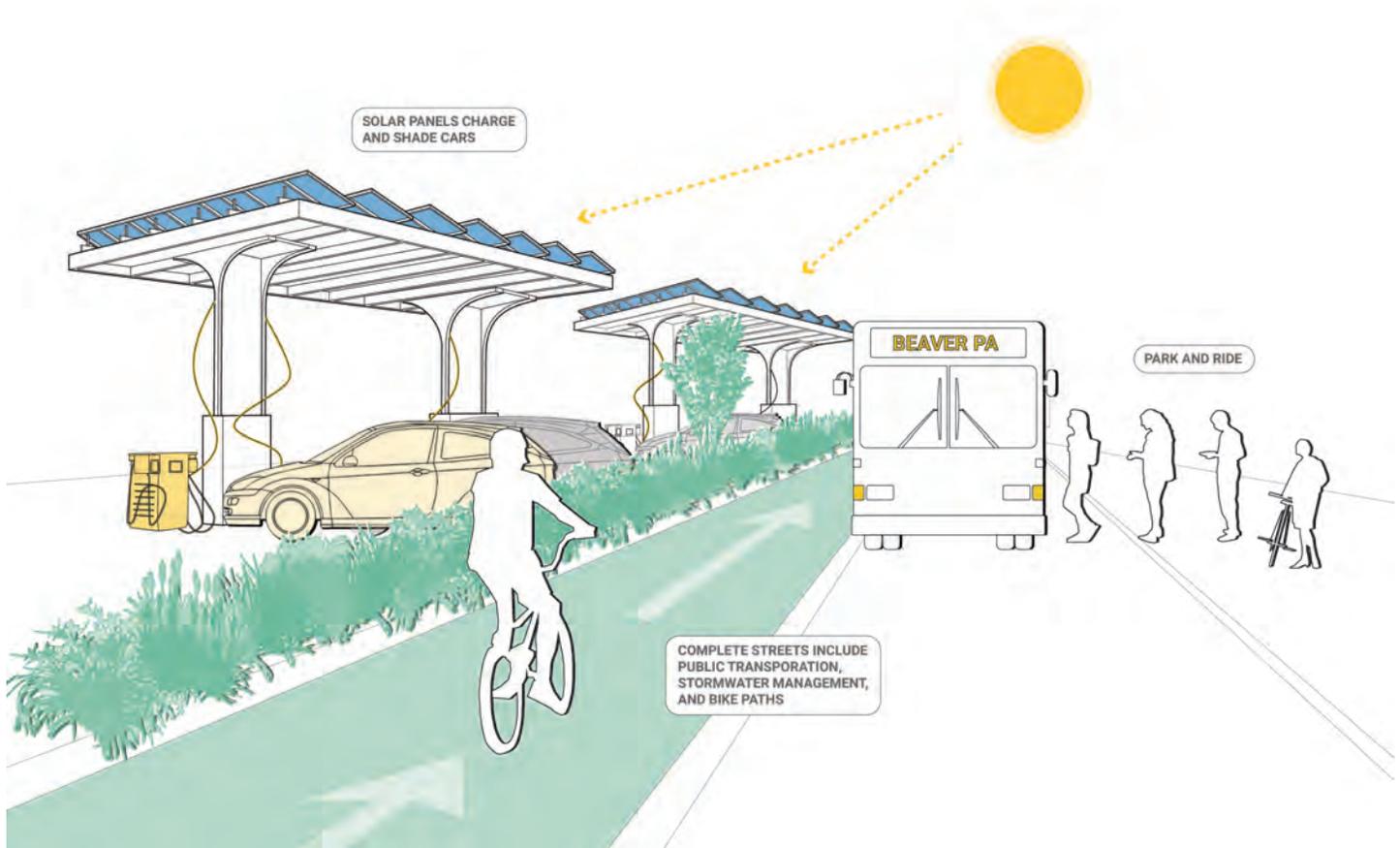


In 2018, Slim Forsythe and the Supersonics plugged into one of five new Solar Charging Stations as part of Pittsburgh's effort to go 100% renewable by 2030. Photo by Bob Bauder with the Tribune Review.

Post-Its are created with participants' notes from the first Re-Imagine Beaver County Visioning Session in 2017.

SECTORS OF GROWTH

ENERGY INNOVATION



CATALYTIC PROJECT #1: "WE'RE GONNA DRIVE ON SUNSHINE"

SOLAR PARK & RIDES

Solar park and ride lots allow commuters to leave their vehicles charging while at work. People could park their car in the morning, hop on the bus at the Rochester Transportation Center and come back from work to a "full tank"! In Beaver, many people rely on cars to get around. Smaller projects like the one imagined above could change the way we think not only about access to renewable sources of energy, but also how to plan for future uses of energy. Many participants in the first Re-Imagine Visioning Session imagined a connected Beaver County with bike trails along old rail corridors, and increased public transportation between towns and to Pittsburgh. A connected Beaver County would significantly decrease the carbon footprint of commutes, only needing a car to get to the nearest Solar Park and Ride!

SECTORS OF GROWTH

GREEN CHEMISTRY

Green Chemistry is defined by the EPA as the design of chemical products and processes that reduce or eliminate the generation of hazardous substances, making chemical processes and products safer, not only for the health of people who produce them, but also for the surrounding communities and the users. (4)

The BlueGreen Alliance – an initiative supported by some of America’s largest labor unions, including United Steelworkers – supports the development of Green Chemistry as an industry with a high potential for job generation. A 2011 report released by the Alliance, developed together with the University of Massachusetts Amherst’s Political Economy Research Institute, estimates for example, that if 20 percent of current production were to shift from petrochemical based plastics to bio-based plastics, 104,000 additional jobs would be created in the U.S. economy. The Green Chemistry market is projected to expand to \$98.5 billion by 2020 from \$2.8 billion in 2011, according to Pike Research; and by introducing cleaner and more efficient manufacturing processes, this expansion is expected to save U.S. industries \$65.5 billion by 2020. (5)

An Eco-Industrial Park is a “Community of Companies” working collectively to pursue strategies that enhance their economic and environmental performances through reduced production costs and energy consumption. Environmental care does not have to be bad for business - costs of compliance, and eventually even the cost of some R&D, could be shared with other companies, increasing profits. (6)

The Cape Charles Sustainable Technologies Industrial Park in Virginia is an example of an EIP. With an investment of \$7.5 million, it was developed as a greenfield project with an estimated job generation potential of about 400. The project was initiated by the local government, which is seen as a key actor for ensuring the success of EIPs. (7) The high number of brownfield sites to be redeveloped in Beaver County makes the innovative green manufacturing facilitated by EIPs an especially promising initiative for re flourishing the region’s industrial heritage.

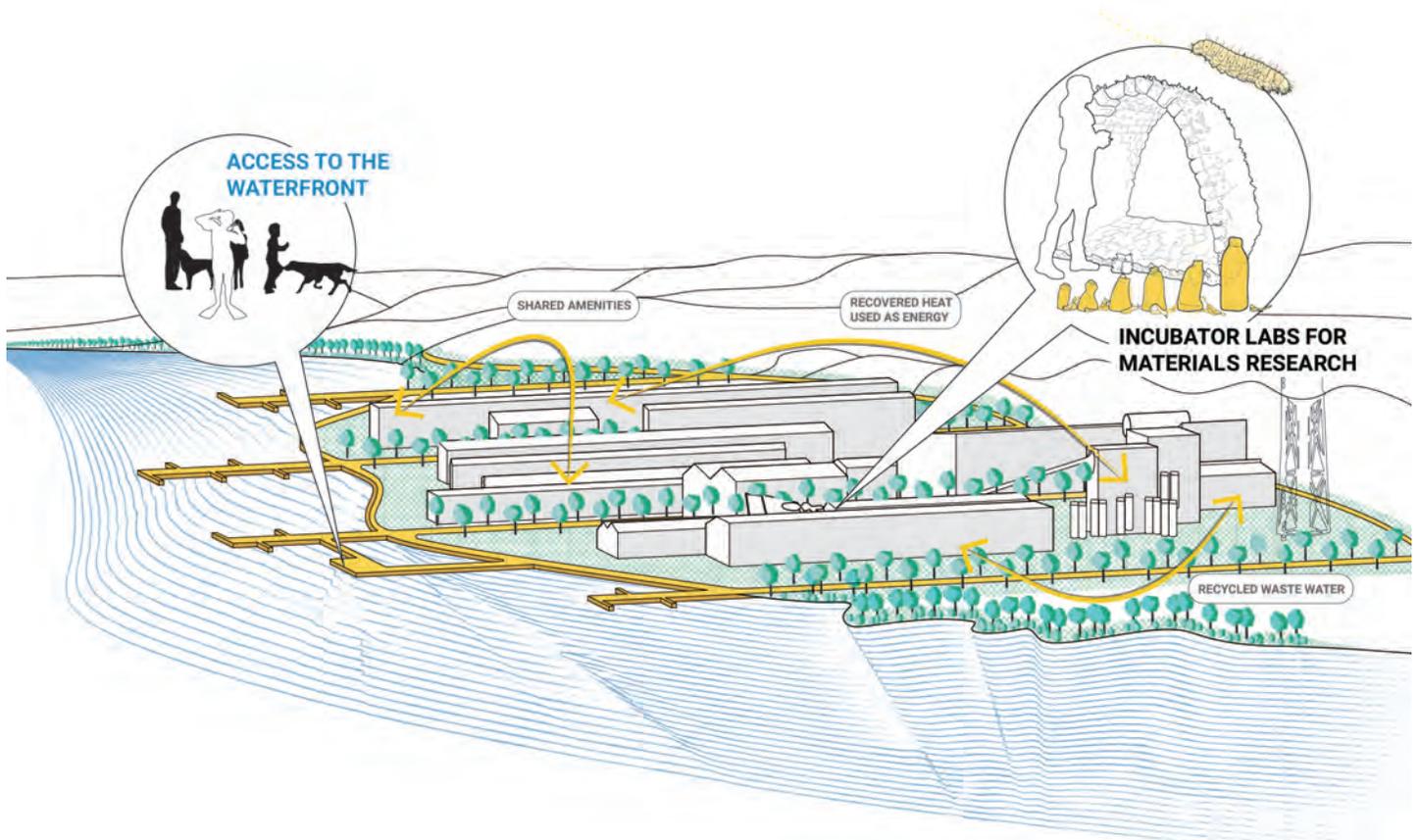
Starting soon, all Ikea furniture will be unpacked from biodegradable mushroom (fungus-based) packaging, replacing common single-use polystyrene. Beaver County could be known for the first bioplastics innovation park. Such a park would follow EIP guidelines for sharing resources to develop smart materials made from renewable resources for the same uses as environmentally destructive petroleum-based plastics.



Ecovative, a company that started the trend in mushroom packaging is now looking at ways to create self-growing mycellium shelters.

SECTORS OF GROWTH

GREEN CHEMISTRY



CATALYTIC PROJECT #2: A NEW INDUSTRIAL LEGACY

ECO-INDUSTRIAL PARKS ON BROWNFIELDS

Beaver County's industrial legacy is powerful and has proven to continue to attract high-tech industries to the Ohio River Valley. Three large brownfields connected by future bike paths along the Ohio River, in Midland, Monaca and Aliquippa could be the host to more than one Eco-Industrial Park (EIP). An EIP would translate the region's industrial history of environmental degradation into a legacy of sustainable economic growth and environmental health. The same space could be used for dual recreational access to the river and high-tech manufacturing. Plants can perform phytoremediation to bring back life to a brownfield while increasing the quality of the environment. Perhaps, after working all day in the incubator labs, testing mushroom-based materials applications, an employee at the Eco-Industrial Park could go for a quick dip in the Ohio River before meeting up with friends for dinner on the boardwalk.

SECTORS OF GROWTH

SUSTAINABLE AGRICULTURE

Pennsylvania is a national leader in food and agriculture, and it is in the Commonwealth's interests to ensure the industry remains a vibrant part of the state's economy. In addition to leading the country in export grade hardwoods and mushroom production, Pennsylvania ranks among the top five states for poultry layers; milk from cows; Christmas trees; and the nursery, greenhouse, floriculture, and sod sectors. As the organic segment of Pennsylvania agriculture has rapidly expanded, the Commonwealth has risen to second nationally in organic farm sales and fourth in the number of organic farms – a trend that should be encouraged. At the same time, as the farming population ages, Beaver County must invest in farm-to-school programs to build awareness of agriculture and agricultural products in Pennsylvania.

Farms like the Glynwood Farm in Cold Springs, New York, are a great example of how to maintain and build the vibrancy of sustainable agriculture. The Glynwood Farm extends back into the community with an apprenticeship program and a Hudson Valley Farm Business Incubator. The apprenticeship program offers young future farmers a comprehensive curriculum on farm management and business skills, with a focus on the potential of sustainable agricultural practices. It is part of a bigger program called C.R.A.F.T. – Collaborative Regional Alliance for Farmer Training – intended to stimulate knowledge-sharing among farm enterprises. The program is currently present in eighteen different regions throughout the United States, and its model could be replicated in Beaver County. Southwest Pennsylvania has a number of educational institutions which could partner with local farms: Penn State Beaver, Beaver County Community College, Geneva College and Robert Morris University are just a few.

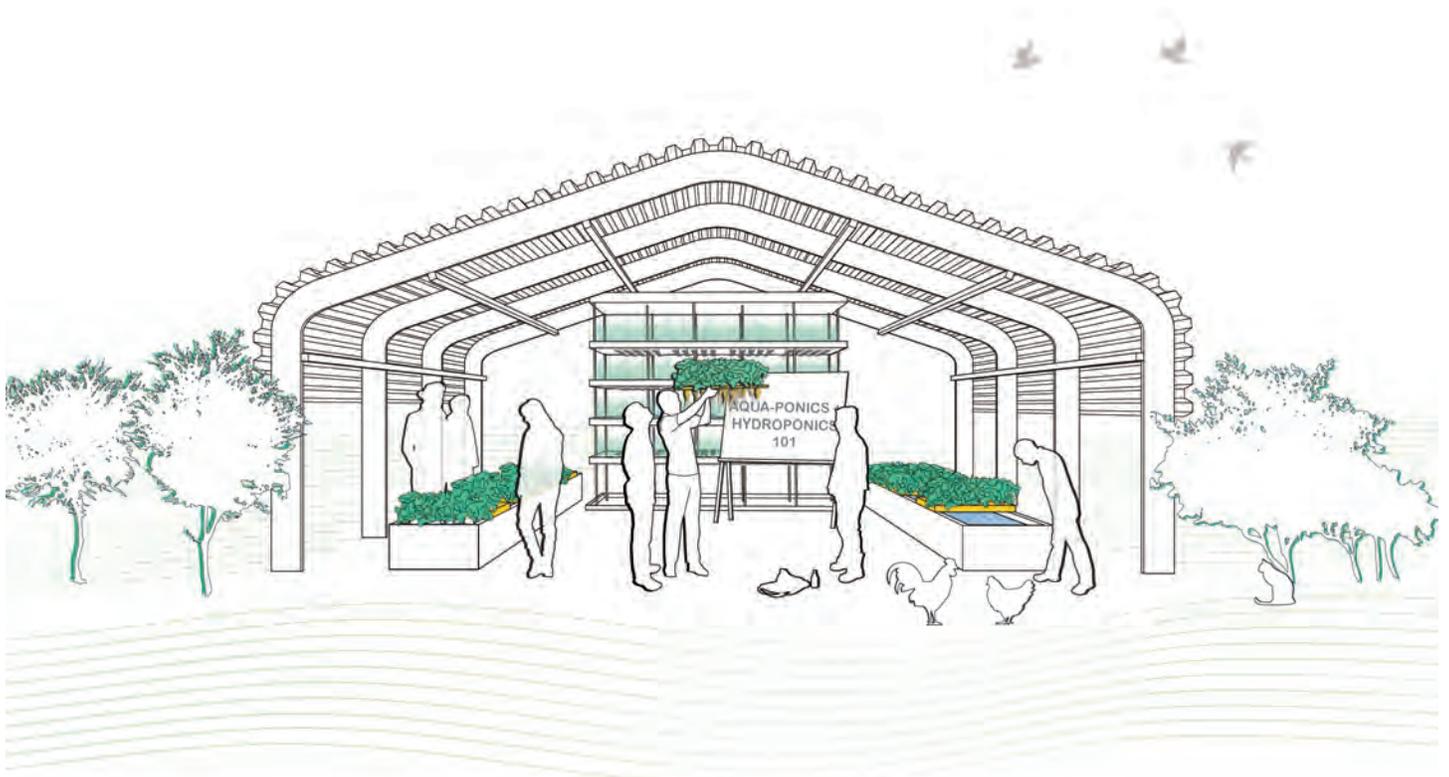
WE WANT TO:
**WORK WITH
HEMP!**

WE IMAGINE:
**COMMUNITY
GARDENS +
COMMUNITY
SUPPORTED
AGRICULTURE**

WE NEED:
**SUSTAINABILITY
ACADEMIES**

SECTORS OF GROWTH

SUSTAINABLE AGRICULTURE



CATALYTIC PROJECT #3: FOOD SYSTEMS AND EDUCATION

WORKSHOPS, INCUBATORS AND PARTNERSHIPS

"We tried to think of the food economy and how to increase the number of young people by creating "incubators" and "industrial kitchens" as common space for learning and making."

Notes from the Re-Imagine Beaver County Visioning Session in 2017

The agricultural sector has a huge carbon footprint and alternative farming techniques are desperately needed. But the work is in building better connections between people. Participants at the first visioning session brainstormed ways to retain young professionals in Beaver County including young farmers. Small grants for educational workshops between local high schools, colleges and the County's organic farms could spur small business incubators and strong partnerships down the road. Students may learn about innovative and sustainable growing techniques that extend the growing season like hydroponics or aquaponics and inspire a new generation of farmers. Desire from participants for sustainability academies and traveling farmer's markets could also be ways to engage young people in sustainable agricultural practices.

SECTORS OF GROWTH

RIVERFRONT DEVELOPMENT

As a main driver of legacy industry in Beaver County, the Ohio and other rivers present myriad opportunities for a future green economy. The Recreation and Tourism sector has been of growing importance for job generation throughout the world. According to the International Labor Organization, by 2026, 1 out of every 9 jobs will be supported by tourism directly or indirectly. (8) One of the most notable initiatives in Riverfront Tourism and Recreational Development has been created in Milwaukee, WI. Once a dirty industrial corridor, Milwaukee's riverfront and its RiverWalk area are now a source of pride for its inhabitants. The riverfront redevelopment has attracted \$100 million in investments.



Beavers love wetlands!!



Ospreys nest along the state's larger waterways, but habitat destruction and water pollution made these areas unsuitable until protections for this recovered species were put into place.

A step-by-step guide to creating successful trail towns is available from the TTP, and it provides tips from the planning and financing stages through real estate development and marketing. These resources should be considered while planning development along the proposed Ohio River Trail to create a cohesive, sustainable regional plan. (10)

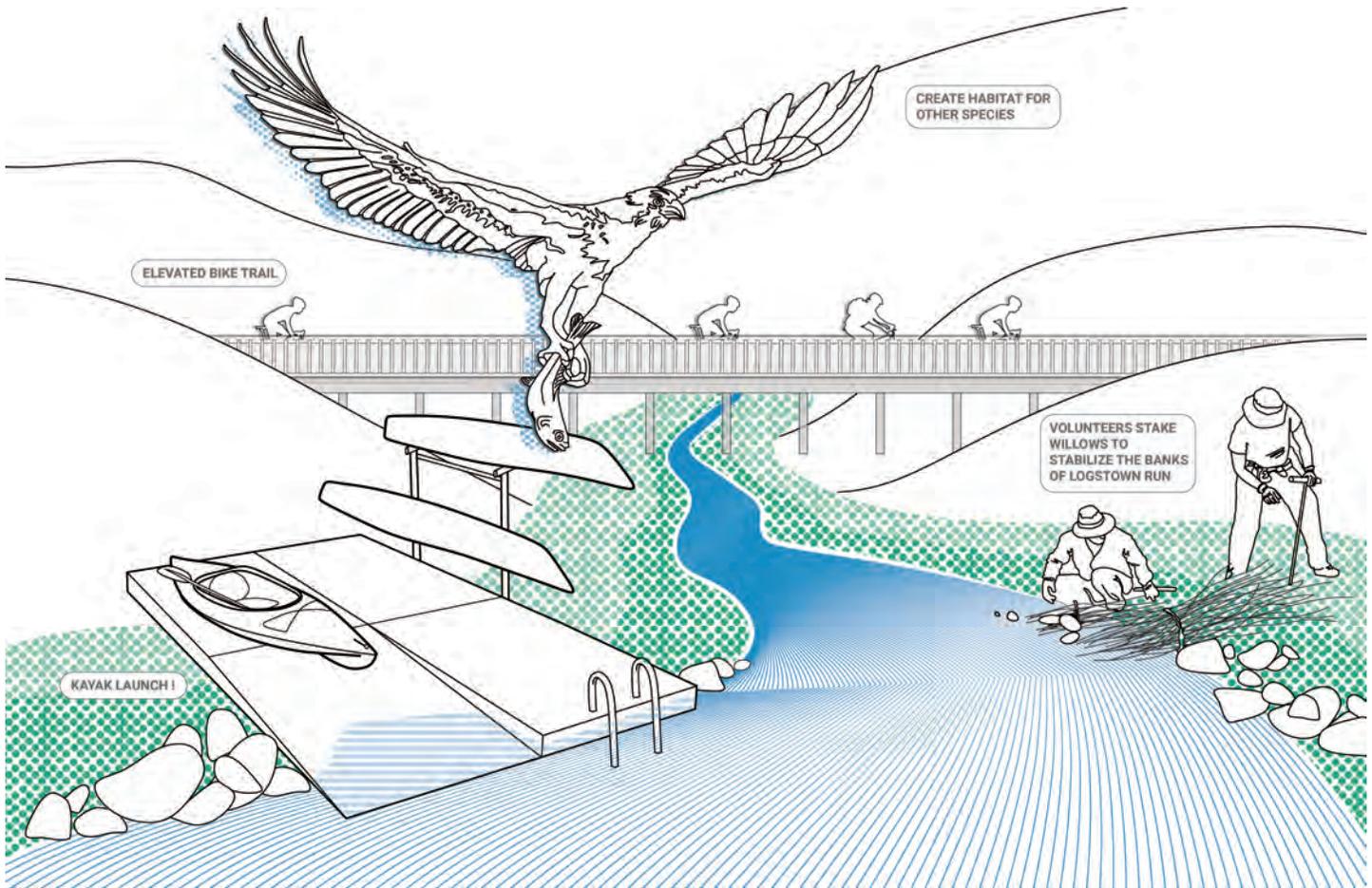
Brownfields left by abandoned industrial sites along the Ohio River are primed for redevelopment. The creation of the Ohio River Greenway Trail holds considerable economic potential, as other parts of the region have shown by successfully harnessing rail trail town development. (9) The Great Allegheny Passage (GAP), a 150-mile trail from Pittsburgh to Cumberland, MD, has created an overall economic impact of \$50 million according to a 2012 study by the Student Conservation Association Trail Town Program (TTP). Another study done by the TTP found that in an eight-year period, a net gain of 65 new businesses and over 270 jobs was directly attributable to the trail, with \$8 million in loans and \$6 million in private investment going to these businesses.



2011 brought heavy rain to Aliquippa, flooding areas where culverts were overwhelmed by high volumes of stormwater in a short amount of time.

SECTORS OF GROWTH

RIVERFRONT DEVELOPMENT



CATALYTIC PROJECT #4: SOFT EDGES

LOGSTOWN RUN RESTORATION

Franklin Street of Aliquippa sits on top of a culvert built in 1909 to contain a once meandering creek that flowed into the Ohio River. Daylighting Logstown Run would alleviate stormwater management issues that have plagued Aliquippa since the city was built and reconnect the city to the natural hydrologic system. Riparian planting and stream bed restoration with volunteers could not only help the city function, but could be a destination for eco-tourism along the Ohio River. Cost benefits from no longer maintaining the aging culvert and paying for flood repairs would be supplemented from increases in hospitality, bike repair stores, fishing gear shops and recreational outfitters. Light-touch access to the Logstown Run and the Ohio River, like a floating kayak launch and storage, or an elevated bike path across the waterway would allow passage of fish, birds, and species that naturally clean and preserve the ecosystem.



BUILDING UP: BEAVER COUNTY'S EXISTING ECONOMIC ASSETS

Re-Imagine Beaver County has taken a birds-eye view of the County's existing resources and identified several strengths that would be integral to any sustainable economic program. These include access to an educated young workforce; a desire to "go solar;" an abundance of potential educational and private sector partners; plugging into regional sustainable networks; and the County's natural beauty.

YOUTH

Young people will drive tomorrow's economy and will inherit our economic and natural environments, so they should be considered a particularly valuable resource. Beaver County's proportion of the population between the ages of 18-24 and 25-34 are respectively 1.8% and 1.3% less than the state average (11). Focusing job training on creating a local green workforce may help retain young people. For example, according to the US Bureau of Labor Statistics and Pennsylvania's Solar Future Plan (12), the need for solar installers will increase more than 100 percent by 2026, and has already grown 168 percent since 2010.

SOLAR

More solar capacity is needed for Pennsylvania to stay on track of its goals for the Alternative Energy Portfolio Standards (AEPS). In 2017, Pennsylvania needed to produce 368 megawatts (MW) of solar energy to stay on target but only had the capacity to produce 294 MW. The gap between solar production and AEPS goals will only continue to widen without the growth of the local solar industry. In 2019 the goals say the state should have 494 MW of electricity generated by solar. In addition to the projected growth in solar jobs, jobs in the solar sector are also desirable. The median installer wage is \$20 per hour, and supervisors make an average of \$30 and \$38 per hour in the installation and project development sectors, respectively, according to the 2017 Annual Solar Job Census (13). Many jobs in the sector do not require a bachelor's degree. Attracting solar manufacturers and installers coupled with encouraging residents and businesses in Beaver County to go solar could create precisely the desired economic, social and environmental benefits desired by residents.

The many local benefits of solar energy can also be found in the commercial and municipal sectors. Solbridge Energy Advisors is a PA-based independent consulting firm that provides community education and assistance in the implementation of renewable energy technologies for homes, businesses and municipalities throughout Western PA. By engaging with decision makers on every level, Solbridge utilizes unbiased expertise to help end-users understand the various strategies for going solar. From long-term fiscal sustainability, to community health, to job growth and educational opportunities, local solar development should be considered as an integral part of Beaver County's future.



LABOR

The solar industry also fits into Beaver County's historically strong organized labor fabric. It is supported by the BlueGreen Alliance (14), a coalition of America's largest labor unions - such as United Steelworkers and Service Employees International Union (SEIU) - and environmental organizations "creating good jobs, a clean environment, and a fair and thriving economy." Construction of geothermal and biomass projects also provide opportunities for contracting labor unions, as well as manufacturing of green products such as wind turbines.

FINANCING

Pennsylvania recently signed into law Commercial Property Assessed Clean Energy (C-PACE) financing. Beaver County could set up energy improvement districts allowing private lenders to provide businesses with funds to make their properties more energy-efficient. The money is paid back out of annual tax bills for the property. Other opportunities such as solar co-ops exist. Solar United Neighbors, an organization that recently launched a Pennsylvania division, organizes individuals, neighborhoods, municipalities or companies into cooperatives to leverage bulk purchasing power and find the best available deal on solar installations for the entire group (15). The co-op model generally provides immediate savings from bulk pricing, on top of future savings on energy costs. Allegheny, Cambria, Crawford, Greene and Washington counties are all currently in the process of establishing their co-ops. By connecting with Solar United Neighbors, Beaver County residents can get the same access to energy savings, increased property values and energy independence as their regional neighbors.

LOCAL COLLEGES AND UNIVERSITIES

Local colleges and universities could provide additional training and education for sustainable jobs. A workforce for a new regional sustainable economy could be provided by students of Biochemistry, Environmental Engineering and Environmental Studies at Geneva College; students of Natural Science, Biological Science, Process Technology and Building Trades Technology at Community College of Beaver County; students of Biology at Penn State Beaver; as well as other programs just outside of Beaver County such as Slippery Rock University's Environmental Studies and Sustainability degree or Chatham University's dual Masters of Sustainability-MBA. These institutions also provide unique partnership opportunities. For example, Slippery Rock's Sustainable Enterprise Accelerator (SEA) partners with entrepreneurs to jumpstart sustainable businesses. Both fledgling and established business owners in Beaver County who desire more efficient and sustainable businesses could benefit from a relationship with SEA or a similar partnership with institutes of higher education.



GREEN BUILDING

Some existing Beaver County industries and other businesses are already benefiting from sustainable practices, with approximately 100 buildings listed in the Green Building Information Gateway (GBIG) (16). These include Energy Star and LEED certified buildings, as well as companies who report greenhouse gas (GHG) emissions to the EPA. According to the Green Building Alliance, an independent nonprofit helping people and businesses “create environmentally, economically, and socially vibrant places” in Western Pennsylvania, green buildings can reduce energy use by up to 50 percent and water use by up to 40 percent (17), savings that would benefit any home or business while helping the environment. Some businesses in Beaver County are already recognized by the Green Building Alliance (GBA) with green building certifications, but the resources on creating greener buildings offered by the GBA should be harnessed at the county level to create larger impacts and savings. The Green Building Alliance provides information on building strategies such as indoor lighting solutions, cool roofs, parking lot runoff and landscaping, that could be made available to everyone in Beaver County (18).

JOB CREATION

Energy efficiency also creates jobs. According to the Clean Jobs PA Report, the energy efficiency sector provides 65,000 of the state’s more than 86,000 clean energy jobs and like most green jobs, the sector is growing (19). Attracting and supporting local energy efficiency jobs is a key stepping stone towards a greener economy in Southwestern Pennsylvania, particularly because the region has a large stock of old buildings. Repurposing and retrofitting old buildings is an excellent example of reuse. In addition, according to the Tribune-Review, construction jobs are also increasingly “green” because of the popularity of green buildings (20). In Beaver County, Veka Inc. is a business leader in the energy efficiency sector supplying energySTAR-compliant windows and other energy-saving products (21).

LEGACY INDUSTRY

One of the main drivers of the legacy industry in Beaver County, its rivers, also present myriad opportunities for a future green economy. Although the proposed Ohio River Trail is approximately one-fifth the size of the much larger Greater Allegheny Passage (GAP), the Ohio River Trail would benefit from being linked to the GAP via the Montour Trail. Considering the impact of a smaller trail, the 62-mile Titusville-Park section of the Erie to Pittsburgh Trail has an overall economic impact of \$7.48 million according to the TTP (9, 10). The economics are significantly positive for river trail development in the region.



DIVERSIFICATION

Beaver County has undergone many changes in the past half-century. Some were well planned, years in the making. Others were unexpected, like the collapse of the steel industry which caused a rate of unemployment in Beaver County of 27.1 percent in January 1983, higher than the national rate during the Great Depression (22). The county and region have since partially recovered in part because of a pivot toward healthcare. Four of Beaver County's current top ten employers by employment fall within the healthcare sector (23). While the healthcare industry will be a key to future growth, diversifying the county's economy further with a focus on future key industries will only make Beaver County more resilient.

Much has been done to bring jobs back to Beaver County since the collapse of the steel industry. However, Re-Imagine Beaver County recommends focusing future job creation efforts on a diverse set of sustainable businesses and job sectors, in order to prevent the impacts of an industrial collapse like that of the 1980s. Establishing a green task force in Beaver County would allow the county to engage the community in planning for a sustainable future.

COUNTY COMPREHENSIVE PLAN

Beaver County's 2010 Comprehensive Plan acknowledges multiple individual sustainable practices including alternative energy, conservation and public transit (24) and is a beginning foundation for more complete future plans. The Plan's stated goal of a "safe and well-planned transportation system that provides options and effectively connects the places people live, work, shop and entertain themselves" identifies a variety of strategies including transit-oriented development, pedestrian access, bicycle infrastructure and studying the feasibility of light rail solutions. The Plan's goal of promoting alternative energy sources in pursuance of Pennsylvania's Alternative Energy Portfolio Standards (AEPS) (25) would benefit from more defined objectives and strategies.

TOWARD SUSTAINABLE ECONOMIC GROWTH

Achieving the benefits of alternative energy sources - economic growth, job opportunities and public health improvements - could be accelerated with defined goals and objectives specific to the County, similar to those dedicated to public transit in the Plan. Creating such definitive and achievable goals would not only further the previously stated goal of contributing to AEPS compliance, but would be the first step toward making Beaver County a regional leader in renewable energy. In addition, strategizing across and between different sectors discussed in this document would further promote the County's leadership toward sustainable economic growth.

CASE STUDY

Indiana County, Pennsylvania Sets Example for Going Green

In April 2017, Indiana County hosted a Sustainable Economy Summit. Sponsored by the League of Women Voters of PA, in collaboration with League of Women Voters of Indiana County, Center for Community Growth, Evergreen Conservancy, the Indiana University of Pennsylvania (IUP) Sustainability Studies Program and the Indiana County Office of Planning & Development, the Summit had the initial objectives of 1) informing the community about types of renewable energy, energy efficiency and other aspects of the sustainable economy; and 2) helping communities start to plan and implement sustainable development to bring economic growth to the county. A desired impact of the Summit would be the creation of a county-wide task force to investigate and encourage jobs and training in the clean economy.

A main outcome of that Summit was for the County's Commissioners to establish the Sustainable Economic Development Task Force with the mission of identifying "new opportunities in economic development, education and job training (workforce development) in the renewable energy sector, agriculture, building construction, and environmental restoration and stewardship" (26).

According to Indiana Commissioner Sherene Hess, "The clean energy industry generates hundreds of billions in economic activity, and is expected to continue to grow. There is tremendous economic opportunity for the counties that invent, manufacture and export clean energy technologies" (27). Commissioner Hess says renewable energy and sustainable agriculture can play an important role in rural economic development and has welcomed community input.

Despite ranking third among Pennsylvania counties in the production of coal with 10 underground mines and 13 surface mines (28), Indiana County has officially inserted into its agenda the pursuit of a diversified economy that will connect it to the demands of the 21st century.

Indiana County's Task Force is divided into four economic focus groups: Sustainable Agriculture, Renewable Energy, Sustainable Building Construction, and Environmental Restoration & Stewardship. Each group has up to 20 members and has developed its own set of recommendations. Working closely with the Indiana County Office of Planning and Development, the groups are responsible for collecting data related to their recommendations, analyzing the potential for developing them, and for suggesting strategies to attract new businesses to Indiana County.

One of the priorities of Sustainable Indiana County is helping downtown Indiana to become an effective outlet for local food producers. A goal is to provide access to healthy, locally-produced foods for people at all income levels and improve the local economy by supporting county producers, especially those employing sustainable farming methods. Indiana's Sustainable Economic Development Task Force is also one of 16 sites across the nation recently chosen by

the U.S. Environmental Protection Agency in a program, Local Foods, Local Places, designed to revitalize downtowns, boost the local economy, improve public health, and protect the environment through local food enterprises. Beyond that, the Indiana Area School District recently announced a plan to install solar panels in its schools - an initiative which could also be seen as influenced by the work of Sustainable Indiana County.

It is not a stretch to say that Beaver County could also set up a sustainable economic development Task Force using a similar process to study and develop sustainable initiatives, some resembling Indiana County's and others unique to Beaver County. The Task Force process can bring together citizens and leaders from business, education, government and other sectors to mobilize resources, attract new businesses and initiatives, generate funding, and stimulate the creation of a diverse set of high-quality jobs.



RECOMMENDATIONS

The sectors for sustainable economic development explored in this report – Sustainable Agriculture, Energy Innovation, Riverfront Tourism & Recreation, and Green Chemistry and Manufacturing – all derive from the visioning exercises conducted by Re-Imagine Beaver County in 2017 and participated in by over 100 people.

The catalytic projects mentioned and depicted in this report represent tactical approaches to implementing growth in these sectors – approaches that could be developed and executed via a process that a green economic development task force could provide.

To supplement a green economy task force and attract interest from sustainable enterprises, Beaver County government could also adopt incentive strategies such as those suggested by the National Association of Counties’ “Growing a Green Local Economy” report (29). These incentive strategies include assistance with grants and loans; contributions of infrastructure or staff; subsidized loans; tax credits; and refunds. A Beaver County green task force backed by incentives could capitalize on existing needs and resources to create clean jobs, clean energy and a more sustainable community.

These recommendations align with Beaver County’s commitment to the Keystone Principles (30) – particularly the principles of fostering sustainable business, restoring and enhancing the environment, enhancing recreational and heritage resources, and planning regionally while implementing locally.

Re-Imagine Beaver County commits to working with local leadership to support workforce development and job creation from innovative technologies that balance economic, environmental and social benefits to achieve high quality of life and long-term prosperity for residents of Beaver County. We envision a greener local economy that springs from diverse, equitable and sustainable economic development decisions to create a resilient, healthy, and thriving Beaver County.

To facilitate the coordination of sustainable strategies encompassing alternative energy solutions and job creation, as well as issues and assets unique to Beaver County, Re-Imagine Beaver County recommends creating a mechanism such as forming a green economy task force. A task force could assess local green economic resources and strategies; identify county-wide green economic goals; gather input from stakeholders such as local industries, small businesses, workforce training providers, nonprofits, and residents; and assist in the creation of a county-wide strategic plan for sustainable job development.

LET’S GROW A GREEN ECONOMY IN BEAVER COUNTY!

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Re-Imagine Beaver County – The Kick-Off

Monday, March 6, 2017

Notes from Each Table Compiled April 6, 2017



Table 001



difficulty finding innovative sustainable contractors in the building trades

- ex. Recyclable materials
- ex. Stormwater management
 - permeable surfaces
- real estate dev. Sust. bldg. Materials
- tax break for more permanent materials;
- home value
- (materials level changes quickly)
- materials for longevity w/ tax breaks
- honor sust. practices

some neighborhoods/bldgs worth rehabilitating (housing stock is strong)

- renewal
- contractors + investors in rivertowns instead of developing green spaces

improve transportation

- river taxis?
- Bike trails
- dedicated transportation lanes,
 - reasonable investment
 - might impact traffic and the landscapes
- existing rail lines - trains + right of ways?

agriculture

- why can't we bring young farmers into the PA state program to farming?
- young farmers cant afford + older farmers must sell bc made no \$
- some young farmers not sure about innovative practices + conservation planning

young ppl

young people want to see a greener world and use intellectual skills;

we expect a cleaner planet
local to regional to global

early education in sustainable development

livable, mixed use communities

family

transportation

"degradation" - cultural forces, electronics media, kids activities, heroin epidemic

redevelopment in rivertowns

developing green spaces uses resources

landbanking to deal with blight
landlord issues
used to have it for farmers but it was taken out of production

inclusiveness + whose voice is missing

"minorities"

this was not advertised to those communities
the league should look at this

business and new ideas
manufacturing like recycling gains
(we still lose in paper recycling)
ban single use plastic



main circuit to East Liverpool of
to Pittsburgh constant loop

Brit's Commit to less plastic use
solar home community

Plant gardens in our main streets

out of the box builders

re. construction direction

Electric generators in River

walking trails

more rec centers

Ban fracking & water stress

Regional Planning that
considers all these ideas

recycling centers

traffic flow

solar farm community

Underground Railroad Tourist Ctr

history

Paddle wheel boat bus

old bridge

workforce training program

rehab housing

more community centers

solid biomass

swimming pools open

URBAN organic Composting organic hydroponics
Milwaukee WI Growing Greenhouse

Table 002

The people at my table began their discussion focusing on the numerous small communities, especially those along the river, that have really deteriorated after the collapse of steel mills. Their concern centered on the business centers that had mostly empty stores and wondered what could be done to attract business to those areas, noting that the infrastructure was there to serve them.

That brought up a second concern, that of transportation. All of those areas suffer from a lack of public transportation, so people cannot get to jobs or shopping even if it was available. They pointed to Beaver with its compact shopping center and discussed what an advantage it was to be able to walk around the community--that ability to walk to community and shopping destinations was something that they valued and would like to see encouraged in these failing communities.

So the discussion moved to questions of how one might revive these communities along the river. That was when they talked about getting rid of non-working plant facilities along the river and replacing them with community parks, and tying the communities together via bike trails and walking paths, with the hope that at least some types of businesses serving recreational and tourist needs would develop. They also said that they would like to see kayak rental facilities located on the Beaver River and another river near there--people could rent kayaks near the Ohio border and float down to the Ohio River--they pointed out that the currents on the Ohio are not conducive to recreational use. Again, they thought tourist and recreational businesses would develop.

They also wanted to see a real commuter rail line that would travel from East Liverpool into Pittsburgh, which would relieve traffic on 65 and enable people to work all sorts of jobs along that 65 corridor, as well as bring people from Pittsburgh out to the area for recreation in the Beaver area.



[Aside: when in NJ, the town I lived in got a grant one summer to run a "jitney" service to help people participate in the community, get to shopping, etc. They divided the community into 4 areas and these small buses went around their area on a regular basis stopping at designated stops--I cannot remember the hours, but it accommodated teens that had jobs, kids going to camps and to the community pool, library, movies, shopping downtown, etc. They all went to a common stop downtown, so people could use one route and then another. Because it was a grant, the user fee was small (maybe 50 cents) and it was highly used and wildly popular. The smaller buses are cheaper to operate so can be efficient with fewer riders at a time. Something like this might serve as a template for providing transportation in the Beaver area, taking people to recreational areas, area plants, shopping, etc.]

Table 003

Solar roofs on any new bldg in county and on any redone bldg

solar array to power the county in Midland near redevelopment

a pervious concrete plant - manufacture pervious in the county

rip up waterline and put in hydroelectric water lines (generate power by distribution)

bike lanes on all roads

a money (sp?) manufacturing plant

river tourism - History

promote entrepreneurship and jobs for people

art loops Aliquippa, Ambridge, New Brighton

bike repair shops

canoe and kayak ****sp with cafe on Little Beaver River

****sp the Pam Beaver Falls w/ Shuttle going back

Community gardens like in Europe

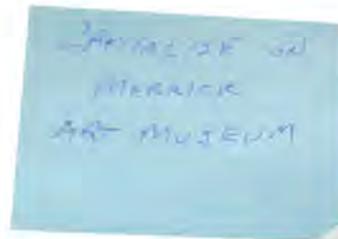
grocery stores in downtown Aliquippa and Ambridge

3 hemp farms

LED lights - any county

Country Yard (sp?) put LED light bulb

put solar panels on ice arena, Brady's run and county courthouse roof



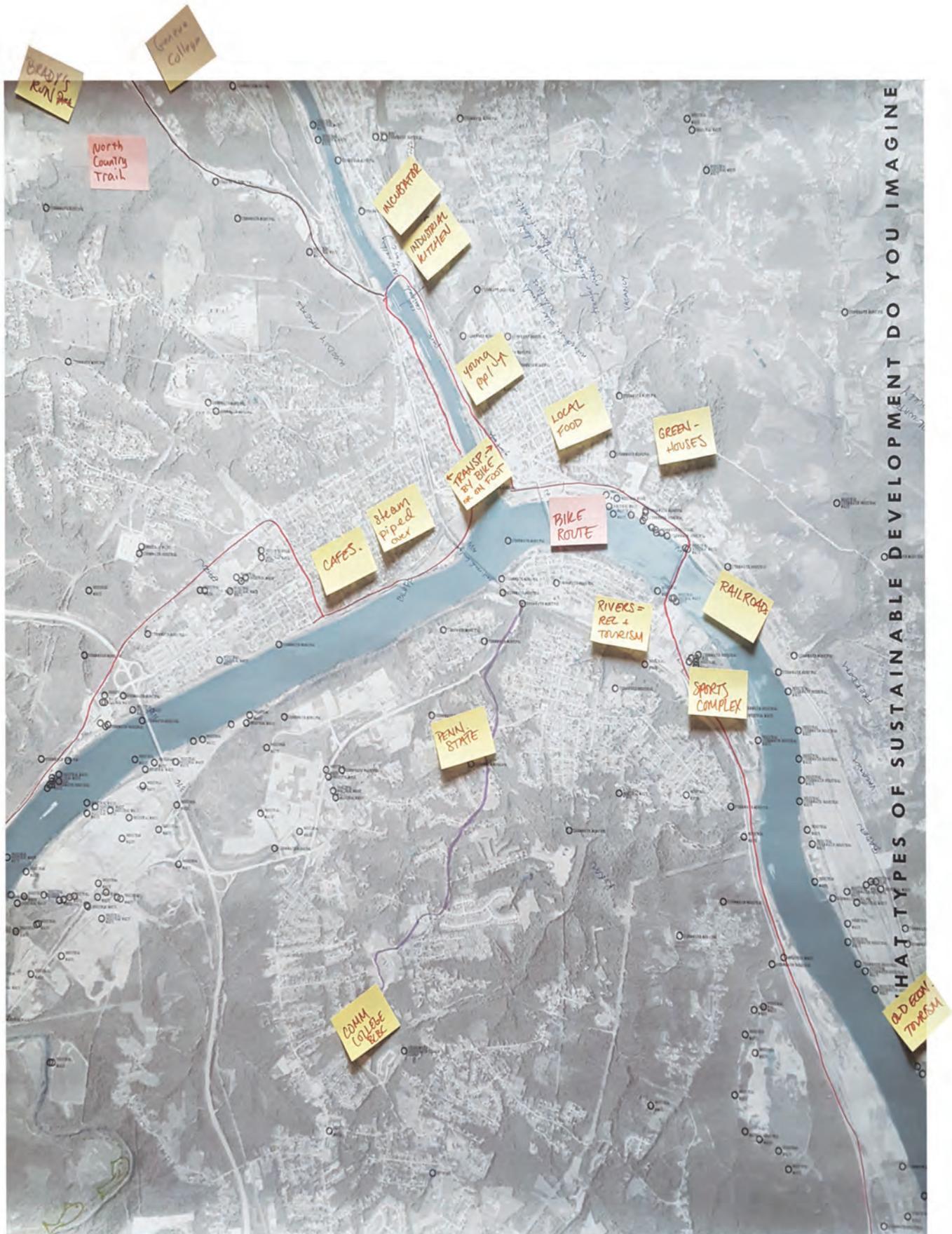
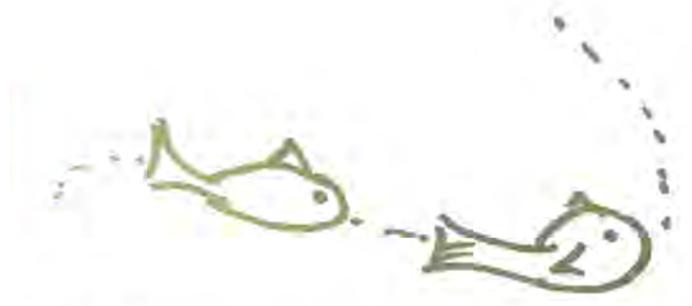


Table 004



Biking and other trails

Pittsburgh trail system, greenways along the water – these absorb storm runoff in the greenspace, parks

Gets the communities connected, who together can then bring in businesses

Noticed that it's inaccessible to cross some bridges without car. Different parts of community not easily accessible to each other. Railroad blocks connection and the path deadends. One park along waterway.

Identified need for cooperation with state to make things safe. Marking map with the roads that are bikeable and those that are not – 3 recent deaths on one 55 mi, bike-designated route

Ohio River Trail – needs land and money to see completion.

If bike trail gets complete – Would connect Lake Erie, east of Cleveland, to Washington DC -- missing link

If you get people bike commuting, people will see that it can be done

Transportation

Live here, work there, want to go out to eat or shop across the river – should be able to bike or walk across.

What about a water taxi? – Per high cost – not efficient

Could ferry ppl from north shore to Horsehead site.

North shore is all bikeable

Using old trolley trail – would give high up view

New bike route – for work commute -area south of river (near mall) this would be tough

Housing

Aliquippa – has some run down houses. Same in Rochester.

Vacant lots mixed with occupied – could utilize “transfer development rights” – way to house large influx of workers at petrochemical facility. Can sell rights in one area to allow for denser development in other areas.

Can require certain zoning changes/ perks – energy efficiency. This assumes petrochemical facility is part of vision – do we want it in our vision? What would we rather have as a job maker?

– local developer – could be someone to connect with. He building condos on a nice park along riverside (an unwelcome development?)

Community character - What to keep, what to change
“A lot I'd like to see happen, not sure what I'd like to keep”

Keep the work ethic, the close-knit parts of the community, libraries, fairs, fire halls

Big mix of people in our population – We have woody areas, where residents have well water, septic systems, 10 acres, don't want anyone telling them what to do. Closer spacing means you need some rules and guidelines.

“We have a pretty diverse population.”

“Reminds me of small towns in central NY.”

Can walk to many places. Libraries, govt. building right there in town.

A bit of Beaver County rebirth happening already– streetscaping, etc.

← TRANSP. →
BY BIKE
OR ON FOOT

INCUBATOR

INDUSTRIAL
KITCHEN

Community character - continued...

Along river – high bluff – River Road has nice path, Fort Macintosh.

Center Twp - ex. of what we don't want – built 4-5 hotels – can't walk to the stores/restaurants across the street – need to get in car and drive across the street

Mixed use residential is good – but not a new idea – “Company towns” set a troublesome precedent

Works at BASF – nearby car parking lot for 1000s of cars – “60s frame of mind – building out a suburbia”

why not just use the existing rail system instead of making a parking lot? Why not make it a park do something with these areas.

Light rail, get people crossing the rivers without using cars – “Can't stand the idea of all these people in cars”

Food and Farms

What are economies based on?
Food, energy, entertainment, etc.,
Food is important one. Ways to grow food locally to meet needs of local area.

Ex: Plan to build huge greenhouses in
Syracuse, NY

Years ago – a good idea when steel mills went down

Crucible steel in midland. Nuke plant – put in greenhouse utilized steam.
not sure why it didn't work

Agriculture

farm – right above site of proposed cracker plant – used to sell stuff right at the farm. Now selling at farmers market due to advanced age/health.

We need some mechanism that “steps the farming up a bit” – an organized plan. Centralized plan for distribution so I can go get the food

Farmers market in Beaver is “coming on strong.”

Greene Twp. good for rabbit hunting

Food Development

encourage innovations by taking the “next step” –

don't stop at farmers market

food incubators

industrial kitchen commercial size
helps ppl get started in rest. businesses



Moving forward inclusively

Who's missing at this event? No young people – even though “kids vote too.” Not sure where the people here tonight come from
are they from groups, organizations?

Diversity of income levels in Beaver County

old milltowns;
elderly folks;
people on fixed income

would be good to have developers here
“they know what they've seen”

Chamber of Commerce – “Do they love us, hate us, do they want us to change?”

Want to see these leaders be part of the conversation going forward. County leaders too.

Get county to interact with railroads –
Our railroads are actually active so that inhibits park building. They will be more responsive than dealing with individual municipalities. Speaking with “one voice” makes it easier to build rapport.

Other Ideas

In Allegheny county, they are seeing a positive “replacement of the mall” – replaced by mixed use development – for ex., senior residence plus small retail area – gives people a place to walk to, a way to counter isolation

Are there financial incentives to incorporate solar into multiunit residences? State level, federal – only ones controlled locally are those that dictate local land use

The way this community looks now was based on the way it was zoned – can incentivize energy efficiency (first) + then look to things like solar panels - zoning

incentives are difficult to manage,
not many people know they exist,
these communities are small, but it's a great tool

Solar farm – people don't know about it

Development won't come from the cracker; Need to hire Beaver County residents

If you're going to sell a vision to the future generations – you need these kind of developments

Next step – when the cooperative jobs to the cracker come in, there will be more development

Could better utilize recreational tourism.
Beaver River – good fishing. Walleye.

Make the areas along the river attractive.

Visit friends, go shopping, enjoy area.
It's very pretty.
And for now it's just lying there.



Table 005

Windmill
Manufacturer

Mushroom
MINES

Farming

two organic farms
Milwaukee "Growing Green"
anaerobic digester food scraps processing plant

Import
Hemp

Education

sustainability academy k-8
permacultures

Housing

net zero house in Monaca
whole communities of these kind of homes
reconstruction junction
training pgm
rehab houses or tear down + build new
recycling centers

Sustainability
academy
K-8

Public Spaces

more rain gardens on main streets
need more swimming pools
- fix gregrer (sp?)
urban organic composting center

Transporation

Paddle wheel boat - river tourism
commuter train
to PGH and for commuters
trails

Solar
parking
lots

County policy

baning fracking in the resevoir

need a regional planning process to coordinate
drilling and environment to make truly livable

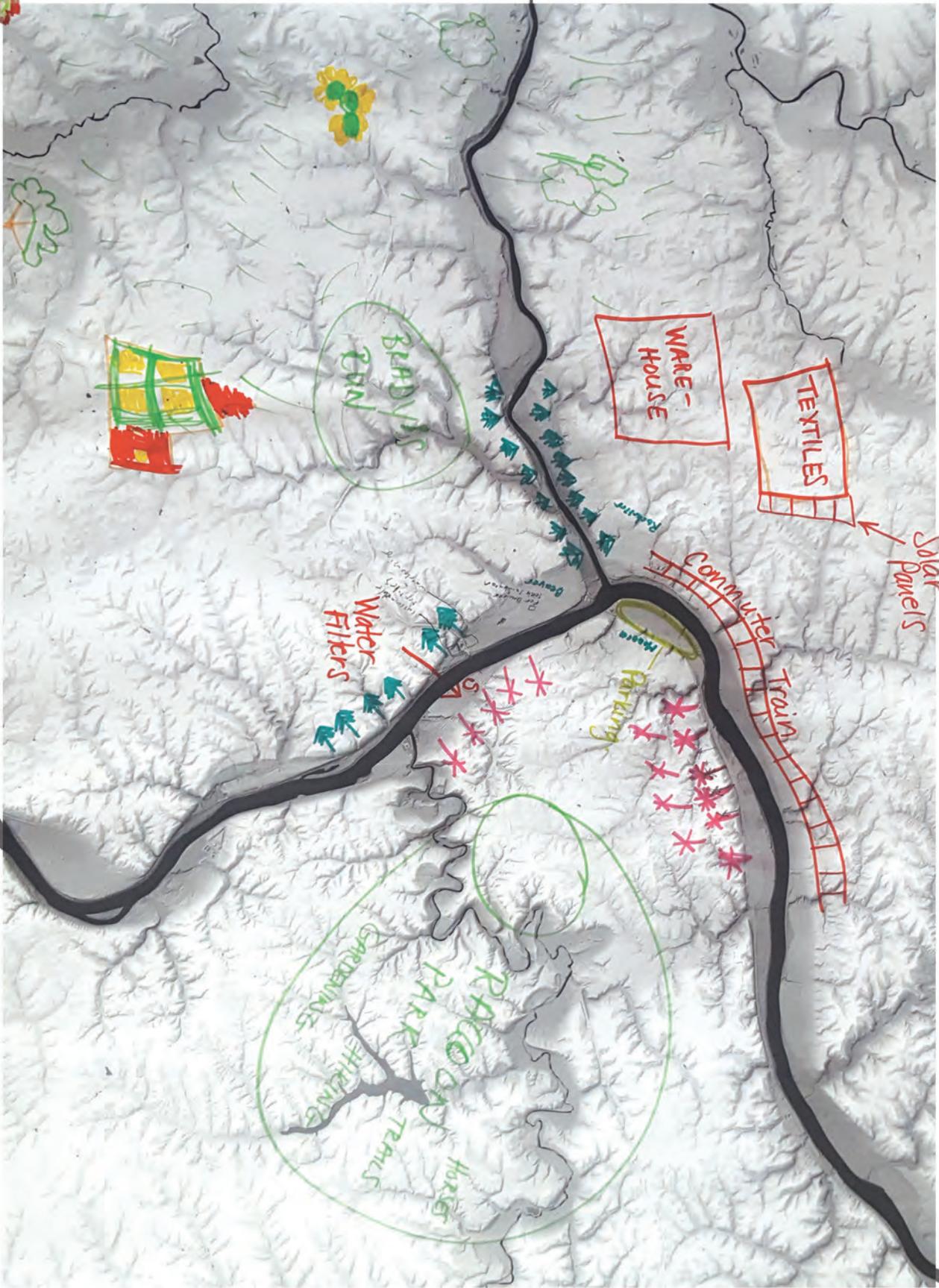


Table 006

Rivers + Parks

Water is natural resource - capitalize
waterfronts are nice
food & entertainment

Clean Up the Westinghouse Dump in the quarry

Shell plant trees - 100 trees taken down 1,000s
buffer of trees along rail
tree education
Shell's filter that will clean the Ohio River

Clean Up the Ohio River
Dredge the river and clean it up
make it a state good

Jobs for folks that don't have an education

Raccoon State Park - take advantage of it!
Advertise and make it a vacation spot
Brady's Run

Energy

built an algae farm

Wind farms along the river near Aliquippa

Get rid of coal-fired plants

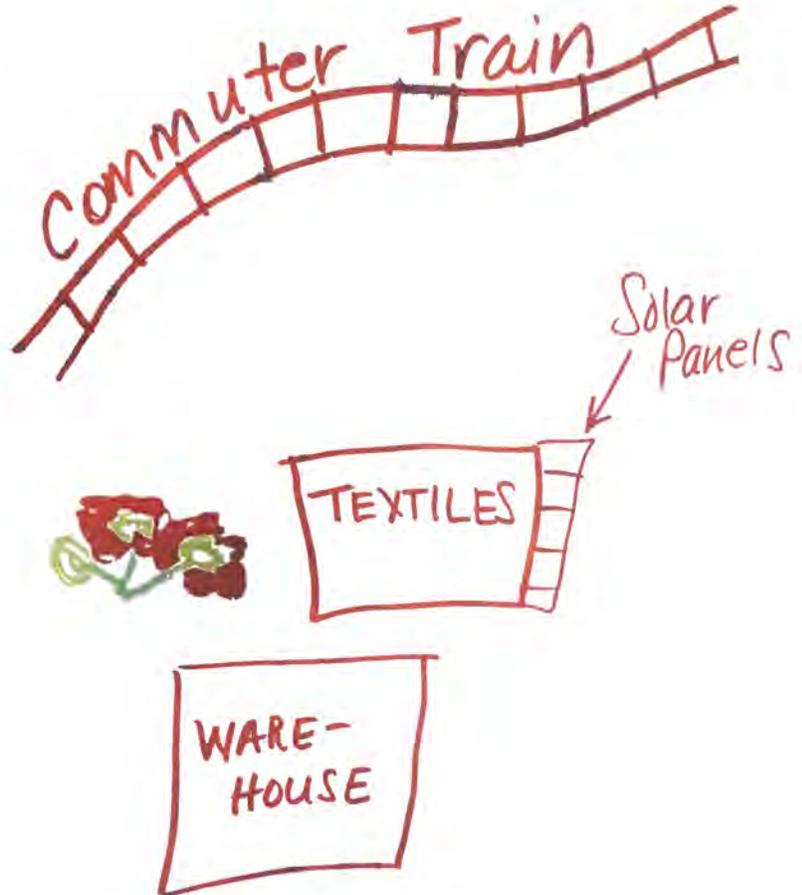
Hydro-farming?

Alternative Industry

Natural Textile development
most of it comes from overseas
solar array like Eaton
Warehousing @ our crossroads/commerce hub

Rivertowns

urban farming - plant vegetables
make downtown accessible in Monaca
build a commuter train
geography makes it hard



Values and Principles
Sustainable

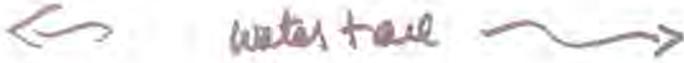
Low Environmental Impact

Improve Quality of Life

Keep identity of the river and make the river a showcase

companies that sustain families

Table 007



River Potential

water trail all along the river

kayaking

More swimming

potential for Ohio River

boat docks, restaurants, river boats

needs investors -

industry hogs the properties,

8 ft of clean fill

More parks

Transportation

Bike Trails

Adopt highways/ beautify

Electric vehicles

Pedestrian Bridge

Culture

history museums

labor

Lewis + Clark

Bvr County - Arts & Crafts shops

Recreational industry

Raccoon State Park

Brady's Run

horseback

fishing

kayaking

Knowledge

Website or Library of Best Practices

a repository of knowledge

people submit their ideas

Classes on old-time skills - candlemaking, etc.

Education

schools

great parents

neighborhood groups

trade apprenticeships

Rivertowns

Beautiful Homes on mtntops overlooks the river

Buildings in downtown Aliquippa

trade apprenticeships

Homewood Almono - Maker Spaces

Transforms vacant lots into community gardens

G-Tech

Outlawing grass in Switzerland

Small loans for sustainable businesses

Organic Gardening - low capital intensive

Traveling Farmer's Market in an electric vehicle

home delivery of groceries

delivery truck with fresh produce

Air monitors to control polluted in FF in PGH

Introduce sustainable plans to every community

Big Business

Sprout fund for Bvr County

Uber Hub

Gov. incentives to bring good jobs in

Solar identity

Organic farming

