

CRANES

Capital Region Advocacy Network for Environmental Sustainability

On behalf of its member organizations and individuals, advocating collaboratively for the environment of the South Central Wisconsin region (eight counties: Columbia, Dane, Dodge, Green, Iowa, Jefferson, Rock and Sauk) toward a high quality of life; an ecologically sustainable and just culture; and, the celebration of the beauty of this place, both natural and built.

VISION

The Capital area's environment, including water, land, and air resources, will be conserved or restored to ensure the region's quality of life and the beauty of this special place, for all who live or visit here, now and in the future.

PARTNER ORGANIZATIONS

Earth/Art® Resources
Friends of Pheasant Branch Conservancy
League of Women Voters ~ Dane County
Madison Audubon Society
Sierra Club ~ Four Lakes Group
W. Dane Coalition for Smart Growth & Environment
West Waubesa Preservation Coalition

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27 July 2013 [rev.03SEP2013, in red; rev.26SEP2013, in blue]

Joe Parisi, Executive, Dane County
John Hendrick, Chair, Board of Supervisors for Dane County

Dear Mssrs. Hendrick and Parisi:

Early this year, the *Capital Region Advocacy Network for Environmental Sustainability* (CRANES) presented to county leadership a framework for a more sustainable approach to the future of the county.

We have been calling this proposal *Dane 2100*. Frankly, we are more interested in the contents of the proposal than the name. Nothing would please us more than for both of our county leaders to take joint ownership of the proposal on behalf of county residents, re-naming it if you wish. In our view, the environment should be one of those areas of policy that—like foreign policy at the federal government level—is approached with unity across both the executive and legislative branches of office, and across changes in leadership.

Fortunately, both the legislative and executive branches of Dane County's government have a proud history of jointly fashioned environmental stewardship on which to build. Also, most of the elected officials are proud to be called environmentalists. So there is good reason to expect that, working even more closely together on long-range environmental policy, the current executive and legislative branches can assure a better future for all county residents.

One of the items we propose is a state-of-the-art scenarios analysis, that would allow current county residents to answer the question raised by a major municipality's leader at a **Budget & Personnel Panel (BPP)** meeting of the Capital Region Regional Planning Commission.

This question should be answered while bearing in mind Dane County's investment in our ecosystems and heritage landscapes, as well as the County's hydrologically complex Yahara watershed, world-class agricultural soils, vibrant communities with still-easy pedestrian/bicycle access to rural areas, and the economic diversity made possible by this unique combination of assets.

The question asked **at the BPP meeting** was:

How do citizens want Dane County to develop for the next 50 years, from our county's current land use mix (82% rural / 18% urbanized)?

- Like Milwaukee County (100% urbanized)?
- Like Waukesha County (50% rural / 50% urbanized)?
- Like Brown County (74% rural / 26% urbanized)?
- Sprawling-as-usual (80% rural / 20% urbanized, likely in less than 20 years)? Or,
- Smart-as-possible (82% rural / 18% urbanized? I.e., accommodate projected population increase within the existing urban service areas, thus allowing the most frugal delivery of urban services)?

Attached, please find a summary of the Land, Sky, and Water programs that earlier this year we suggested could serve as a foundation, for your use, to build an even deeper and comprehensive "*Dane 2100*" program of action.

We have now added a proposal for funding the proposed programs, starting with the FY14 budget. However, we want to point out that some of the Dane 2100 initiatives only require your joint leadership.

Thank you for your consideration of the CRANES proposal. As always, we are available to discuss refinement of the ideas or to advocate for their adoption in the county's FY14 budget.

Sincerely,



Gary Werner
President, CRANES Board of Directors

DANE 2100: A Proposal for a More Sustainable Future
v.03SEP2013

To secure a sustainable and prosperous future for Dane County, CRANES proposes that county leadership, both executive and the board of supervisors, begin in FY14 to take a comprehensive approach to protect or restore our natural resources.

The approach should be “naturally” triple bottom line, aiming to benefit people, planet and prosperity. It should to the fullest extent possible promote Wisconsin’s Public Trust Doctrine, with its emphasis on beauty, scenic values, and public access.

Integrate conservation planning and expenditures across programs and issues, for the most frugal approach. In all these efforts, build in methods for mitigating climate disruption or, when there is no other choice, adapting to it.

There should be an emphasis on making the county more resilient, with eco-cultural economic development that protects and enhances the creative, health, and tourism sectors. The protection of heritage landscape viewsheds and soundscapes should be given priority, within a cultural plan created in 2013-14 as part of the county’s comprehensive planning review process.

SKY

Build energy stability and independence, while eliminating air pollution including greenhouse gasses, for all county residences and businesses:

- Inventory emissions sources (GHGs, CPs, and MATS) using ICLEI protocols
- Inventory conservation/efficiency opportunities and renewable energy resources
- Create a trail map (a.k.a., action plan or road map)
- Call a parley to implement the plan using benchmarks and goals
- Invest in the plan for long-term savings that benefit residents and businesses, emphasizing conservation/ efficiency and distributed renewable power generation

Require all new buildings to be carbon-neutral (or net-carbon-reduction) and solar-ready.

Consider support of a no-fare, renewable-energy-fueled transit system, using BRT, local rail, etc..

LAND

Consider creating a Dane Rural Heritage Reserve, protecting the remaining rural 81% of the county from urbanization for at least the next 50 years.

Reconsider current agricultural practices, toward diversifying use of our working lands in ways that are more climate- and watershed-friendly.

Fulfill the 2012 Parks and Open Space Plan (POSP), including the land protection necessary to complete major regional eco-cultural features such as the *Ice Age Trail* and the *Earth Day Heritage Trails & Natural Wildlife Area*, as well as creation of eight large and interconnected Self-sustaining Natural Resource Areas (SNRAs), that provide pre-Original Survey habitat redundancy.

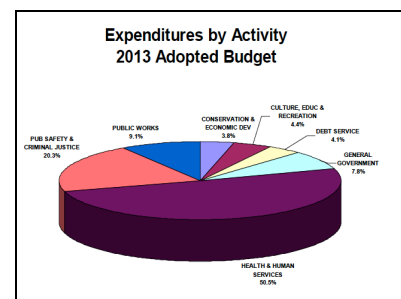
WATER

Using modern ecological research, revisit decisions and compromises made in the 19th and 20th centuries about shorelines, lake levels, public lands, and the public’s experience of the lands and waters in which we have invested.

Restore wetlands to historic extents insofar as possible. Adopt Ultimate Management Practices (UMPs), that allow restoration of natural hydrological conditions (ground, surface, and evapo-transpirational)–adjusted for adaptation to climate disruption–to be applied in all future development, including infill/refill, redevelopment, or greenfield. Maximize consideration of the beauty and scenic elements of Wisconsin’s Public Trust doctrine.

OTHER

Provide an analysis of the FY13 budget, showing what percentage was spent on Environment (rather than combining Conservation and Economic Development, as was the case last year (see figure at right). This analysis would become the baseline for future spending that better reflects the importance of the environment and ecosystem services in Dane County, as well as the related economic sectors of outdoor recreation, tourism, and agriculture. Future spending should match our determination to respond to major 21st century environmental threats, especially climate disruption and the requisite transition from imported fossil fuels to locally produced renewable fuels. Other major threats include: loss of habitat and species diversity; urban sprawl and farmland loss; water quality degradation; and, air pollution.



DANE 2100: FY14 Budget Proposal v.26JUL2013 rev.23SEP2013

The estimated expenses for the following budget items are whenever possible based on the costs of existing exemplars or information provided by experts, for which CRANES can provide documentation. One exception is the EcoVillage proposal, the cost of which depends on scale and location; county development of eco-villages would also entail engaging individual investor-owners, as well as others from the public, private, and NGO sectors, in a partnership that also brings non-county funding.

CRANES feels that each item in this proposal is so crucial that full funding by the county is justified. However, the cost to the county for each item could be lower. Many items are capable of attracting grants from foundations, funding from other governments, or donations from individual donors. For example, see the attached information about Tompkins County's three eco-villages, which earned an EPA grant.

Also, because some of the proposed budget items below have overlapping goals, there is the potential to reduce costs through planning efficiencies. For example, the eco-cultural planning and CLEAN MOU II pilot programs both include heritage landscape components.

| LAND | |
|---|---|
| Capital | |
| \$7,500,000-10,000,000 <u>annually</u> | Dramatically increase annual expenditures on land protection, toward realization of the POSP 2012-17, while targeting SNRAs; nationally significant heritage landscape features such as the <i>Ice Age Trail</i> and the <i>Earth Day Heritage Trails & Natural Wildlife Area</i> ; near-urban areas, stream-scale water quality projects, wetlands restoration in the North Mendota <i>Mississippi River Basin Initiative</i> project area. (This "surge" responds to WI Stewardship Fund reductions and related requirements for hunting/trapping that are sometimes incompatible near Dane County's urban areas or in its near-urban park or natural areas). |
| Operations | |
| <i>TBD</i> | Provide/add Lands & Waters Dept. staff resources for the above surge in land protection/acquisition. [Proportional increase to effectively implement the "surge" in Capital spending above.] |
| \$ 25,000 | Do Fiscal Impact analysis of FY13 BUILD scenario demo project (e.g., RapidFire) |
| \$ 400,000 | Carry out a state-of-the-art scenario and refill/infill analysis of Dane County, completing work in 9 months, while assuring connection with (and benefits from) efforts already underway in other states and countries (e.g., Urban Footprint, with State of CA, UC system, and China). |
| =/< \$ 503,125 | Citizen scenario and issues survey, using stratified random sampling for valid and reliable results countywide, as well as for each of the 61 municipalities in Dane County. Include demographic analyses according to U.S. census protocols. |
| \$ 200,000 <u>annually</u> | BUILD program, incentivizing refill/infill opportunities, as informed by results of all-county scenario analysis. Emphasize climate protection, energy conservation/efficiency, and renewable energy, including urban eco-corridor green-infrastructure. |
| <i>TBD</i> | Provide/add Planning Staff resources as needed for the above land planning initiatives. |
| SKY | |
| Capital | |
| \$400,000 | Photo-voltaic system, large-scale array, akin to the previous airport installation. |
| <i>TBD</i> | See WATER below: incentive program for water softeners that reduce salt and energy use. |
| Operations | |
| \$20,000 | DANE HEALTHY SKIES - PHASE I: (A) Inventory of air pollutants; (B) Inventory of conservation/efficiency opportunities and renewable energy resources. |
| \$15,000 | DANE HEALTHY SKIES PHASE II: Climate Action Trail Map (strategic plan) |
| <i>TBD</i> | Provide Dane County staff coordination (est. 80 hrs for Inventories & Climate Action Trail Map; est. 80-100 hrs for Trail Map tech review, metrics work with UW Civil Engineering, and partnering with CRANES to organize a Climate Disruption Parley in WINTER/SPRING 2014). |
| \$25-50,000 | Study cost/benefit of a no-fare all-county transit system, including identification of potential revenue sources; calculation of reduced Health & Human Services Point-of-Service (POS) provider costs available from reductions in aids-for-transportation; road-capacity construction avoided; etc. [NOTE: Cost estimate for no-fare study was provided by City of Madison staff.] |

DANE 2100: FY14 Budget Proposal ~ CONTINUED

| | |
|---|---|
| WATER | |
| Capital | |
| \$ 500,000-1,000,000 <u>annually</u> | Dramatically increase spending on wetland restoration and streambank easements to protect wildlife and fisheries, while providing public access whenever possible. Include funding necessary to protect these resources from climate change (e.g., increasing stream shading to prevent thermal shock). |
| TBD | Partner with Madison Metropolitan Sewage District and the county's cities, villages, and towns to create an all-county program incentivizing government, institutional, residential, and commercial purchase of replacement state-of-the-art water softeners that reduce salt use, while also reducing energy use. |
| Operations | |
| \$100,000 | Partner with CRANES to proceed with CLEAN MOU II. Use backcasting to explore potential restoration insofar as possible of the Yahara lakes ecological system to "natural" (pre-European development) conditions. Includes funding of a pilot program in the Lake Mendota environs, including 1) a "best case" scenario for the lake's ecosystem, based on current research; 2) leadership-team training by experts in eco-cultural commerce; 3) a public participation plan; and, 4) an action plan using backcasting approaches to foster eco-entrepreneurialism and achieve a more natural Lake Mendota in 1-3 generations. If successful, would then be adjusted as necessary for replication down the entire Yahara watershed chain of lakes. |
| CROSSOVER | |
| Capital | |
| TBD | Partner with the private sector to build one or more EcoVillages demonstrating Living Building and other cutting edge concepts, e.g., as has been done by Tompkins County, NY. As opposed to the Tompkins County development, which was built on greenfields, site the EcoVillages on county-owned land in urban areas, so that they are near job centers, transit, and human services. For example, consider the Alliant Energy campus, which also has agricultural activities, acreage, and other resources compatible with likely EcoVillage activities such as urban farming, horse-based transit education and entrepreneurial ventures, etc. To provide maximum exemplar diversity, include the gamut of housing types, from micro-houses/SORs for the currently homeless, to affordable apartments, to market-priced middle-income and upscale multi-family and single-family, with five stories or less. |
| \$6-8,000,000 | Partner with the City of Madison to build an eco-landbridge connecting Lake View Hill and Warner parks across Northport and Troy drives, enhancing eco-community and habitat connectivity, public safety, and the economy of the north capital area. See the full NEWT proposal, with illustrations and images, at http://www.CRANESinc.org . |
| Operations | |
| \$85-150,000 | Eco-Cultural Plan: Partner with CRANES to create the first cultural plan for Dane County, and make it is one that reflects our environmental heritage: An <u>eco-cultural</u> plan, with a primary focus on protection of heritage landscapes and the potential for economic diversification through cultural, arts, and creative sector activities, including enhanced heritage tourism. Integrate with existing and forthcoming municipal and Overture Center arts or cultural plans. Inventory existing cultural resources (human and built), also performing a gap/opportunity analysis. Create an online cultural map, analyzing the cultural landscape down to the block level (e.g., as was done in Philadelphia), while providing for interactive use by municipalities and citizens (consider inclusion of crowd-sourcing approaches, as has been used in Connecticut). NOTE: The cost estimate range was provided by AMS, the nationally renowned firm that did the City of Madison's arts district plan; however, the low end of the AMS estimate range may not be sufficient to allow for the innovative heritage landscape component proposed by CRANES, or the fine-grained, interactive, and crowd-sourcing ideas. |

DANE HEALTHY SKIES

Proposed Work Program and Schedule v.26SEP2013

PHASE I

September – December

Deliverables:

- A. Inventory 1: sources of air pollutant (GHGs, Criterion/particulate, MATs)
- B. Inventory 2: conservation/efficiency opportunities; renewable energy resources

PHASE II

January

Deliverable:

- C. Trail Map (a.k.a. “strategic trailway” or “action plan”)

February

Climate Parley

January – May

Deploy trail map progress measures (UW Civil Engineering assistance)

By mid-June

Launch actions

EXPENSES [PHASES I & II, 2013 – 14]

Phase I: Inventories \$20,000

Phase II: Trail Map \$15,000

*County staff or contractor time**

- a) 40 hrs - facilitate gathering of data (front-end loaded)
- b) 20 hrs – two to three hours per week supporting inventory and trail work
- c) 20 hrs – miscellaneous, including planning for January-May 2014 activities
 - Staff/technical review of inventories, trail map, and auto-corrective options
 - Task Force review of staff/technical recommendations
 - Public Participation: feedback to Task Force report, toward final revision for Parley

Office overhead

**NOTE: does not include staff time for attendance at county board/committee meetings, when there will be other items on the agendas*

PHASE III [2015 – 2050]

Annual

- Implement or maintain programs, incentives, credits, regulations, etc.
- Check progress toward targets
- Activate auto-corrective actions as necessary

Eco-Village Backgrounder (from Tompkins County, NY)

News Details - Ithaca's Climate Showcase Communities Break Ground

<http://www.tompkins-co.org/news/detail.aspx?ContentID=2021>

Two of Ithaca's Climate Showcase Communities will break ground in late June: the TREE neighborhood at EcoVillage at Ithaca and the Aurora Pocket Neighborhood (APN) project in downtown Ithaca. TREE will add 25 new homes and 15 apartments and the Aurora Pocket Neighborhood will add 3 new homes to the community. Full build-out for both communities is expected to be completed by September 2013.

These two residential developments are designed to achieve Tompkins County's 2050 goal of an 80 percent reduction in greenhouse gas emissions today—using existing and emerging technologies and practices. The homes in the TREE and APN neighborhoods are designed to be 80 percent more efficient than current residential buildings in the U.S. Tompkins County, in partnership with EcoVillage, was awarded a federal grant from the U.S. Environmental Protection Agency (EPA) to show how innovative, on-the-ground approaches can be used to create neighborhoods that enhance residents' quality of life while using fewer resources. The EPA grant focuses on documenting EcoVillage's innovative, successful methods of green building, mixed land-use planning, and community development, and applying those methods to more mainstream developments in a variety of settings.

"The EPA Climate Showcase Communities project grew out of an unexpected collaboration between folks in the community who were already doing this work," said County Commissioner of Planning and Community Sustainability Ed Marx. "This federal grant provides us with the opportunity to elevate this work and communicate it to a broader audience. Our project is the only one focused on new residential development among the 50 EPA climate showcase communities nationwide," Marx explained.

A recent analysis showed that the ecological footprint of residents in the two existing neighborhoods at EcoVillage at Ithaca is 70% less than the U.S. average. The TREE neighborhood aims to decrease this footprint even more, while still preserving a high quality of life for residents. TREE will employ state-of-the-art "Passivhaus" design, which originated in Germany and is considered the greenest building standard in the world. There are about 25,000 Passivhaus certified homes in Europe, but only 13 homes in the U.S. have achieved Passivhaus certification. The TREE community will triple the U.S. figure by constructing 25 new homes which qualify for Passivhaus certification. Estimated home prices range from \$85,000 for studio apartments to \$250,000 for a four-bedroom home.

"During the past two decades, the residents of EcoVillage at Ithaca have discovered that it's possible to maintain a wonderfully high quality of life while using a fraction of the resources most American households require," said Liz Walker, the Executive Director of the non-profit EcoVillage Center for Sustainability Education and one of the founders of the village. "The investment per home to achieve these energy efficiencies is not that great, perhaps \$7500 per house, so the cost is well worth the benefits." "We're actively looking for new members to join the TREE neighborhood," said Walker. "We have 30 out of 40 households filled. We welcome people of all ages and diverse backgrounds," she said.

Visit www.ecovillageithaca.org/treenew to learn more about the TREE project, or www.ecovillageithaca.org/evi/ to learn more about EcoVillage at Ithaca, a co-housing community integrated with organic farming operations.

The Aurora Pocket Neighborhood is a project of New Earth Living LLC, and a collaboration between builder Sue Cosentini and designer Rob Morache. The mission of New Earth Living is to create a new model for living that fosters social connections, affordability, and a minimal ecological footprint. The APN site is at the corner of North Aurora and Marshall Streets in Ithaca, in an existing neighborhood. Homes will be arranged around a common courtyard with many raised vegetable beds and fruit and nut trees. This central courtyard will serve as a gathering place for residents and provide opportunities for social connection and home gardening.

“Co-housing is an absolutely brilliant model for living,” said Sue Cosentini. “I am committed to creating urban dwellings that support and foster connections with each other and the Earth,” Cosentini said. “There has never been a time that we needed to have connections of care, respect, and trust more than we do now.”

In their planning for the Aurora Pocket Neighborhood, Cosentini and Morache evaluated a number of space and domestic hot water heating systems. “We looked at it all: photovoltaic (PV) powered air source heat pumps, solar thermal, resistance electric, masonry heaters, geothermal, and lots of combinations thereof,” said Cosentini. “Where we landed is individual PV arrays for each house that will power the basic electrical needs and a district (shared by all the houses) bio-mass boiler,” she said. The hybrid system will consist of a series of accumulator tanks in each house that serve both the space heating and hot water heating needs. The tanks will be super-insulated so that the boiler fires as little as possible in both winter and summer.

“This hybrid system is emblematic of our climate conditions and our existing incentive structure,” Cosentini explained. “We’re using Passivhaus methodologies as our guiding principles,” said Cosentini. “We’ve been trying to incorporate elements of the Passivhaus design in an economical way, including the thermal break and triple pane window components.”

Learn more about the Aurora Pocket Neighborhood at <http://newearthliving.net/what-we-do/aurora-dwelling-circle/>.

The third project in the EPA Climate Showcase Communities program is a proposed new neighborhood located near Cayuga Medical Center in the Town of Ithaca. Tompkins County owns roughly 25 acres of land near the hospital and will soon be seeking developers to purchase or lease this land and develop a mixed-use residential community there. Several features will assure that the development is environmentally and socially responsible—including highly energy-efficient buildings; a pedestrian-focused environment including connections within the neighborhood and to public transit and, potentially, the Black Diamond Trail; on-site community gardens; and permanent protection of approximately two-thirds of the site as open space.

Potential developers will be evaluated based on rating parameters outlined in the draft Request for Proposals (RFP). Information on the proposed project is available on the Tompkins County Planning Department website at www.tompkins-co.org/planning under the Planning Department News tab labeled “Seeking Comment on Draft RFP.” The Planning Department will release a revised RFP early this summer.

Next week the Tompkins County Planning Department will host public meetings to present the County’s Development Focus Area Strategy and Conservation Strategy. The goal of these strategies is to encourage development of livable communities in existing population centers, while supporting protection of valuable farmland and important natural resources.

Commissioner Marx will discuss the County RFP and how this third Climate Showcase Community exemplifies the County’s long-term sustainability and development goals. Public meetings will occur on the following dates: - Monday, June 18, at 6:30 pm at the Varna Community Center, 943 Dryden Road/Route 366- Tuesday, June 19 at 6:30 pm at the Museum of the Earth, 1259 Trumansburg Road/Route 96- Wednesday, June 20 at 6:30 pm at the Tompkins County Public Library, 101 East Green Street.

For more information, contact Ed Marx at emarx@tompkins-co.org.