

Dane County Departmental SMART Fund

Funding Opportunity Description

The Sustainability Subcommittee of the Public Works and Transportation Committee is responsible for distributing grant money to county departments from a \$2 million fund in the county's 2014 capital budget. This fund helps support the county's goal of becoming more sustainable. For example, it supports initiatives that fulfill the county's desire for reducing greenhouse gas emissions by implementing systems that result in more efficient energy use and investments in renewable energy production at our various facilities. This fund is a part of the county's continued efforts to ensure that important natural resources and ecosystem services are maintained for current and future generations. The pilot phase of the fund was launched in late 2012 and 11 departmental capital projects have been funded since then. The 2014 fund can be used by your department to supplement current budget items that do not have enough funds to incorporate additional sustainable measures or to fully fund projects that are not in the current budget, but that will increase the sustainability of county operations and reduce long-term costs. The committee will select projects to fund based on their consistency with the sustainability principles adopted on October 18, 2012 by the Dane County Board to guide county government management, operations, and policy making.

Benefits of this fund:

- Alignment of departments and staff toward a common understanding of sustainability
- Clarity and consistency in assessing and organizing actions and programs for sustainable government operations
- Enhanced policies and programs incorporating a sustainability perspective
- Enhanced reputation as a proactive contributor to a more sustainable community
- Reduced operating costs

Dane County strives to operate in a sustainable way that will:

- Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;
- Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;
- Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems); and
- Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.

Eligible Applicants:

Dane County Departments

Award Information:

There are 3 deadlines for application:

1. March 7, 2014 — At this time up to 50% of the funds will be awarded.
2. July 7, 2014 — At this time up to an additional 25% of the funds will be awarded.
3. October 6, 2014 — At this time the remainder of the funds will be awarded.

Examples of types of projects that would be eligible:

- Covering the cost differential between conventional and fuel-efficient vehicles to purchase more fuel-efficient fleet vehicles or convert existing vehicles to more fuel-efficient and lower-emission vehicles
- Renewable energy or energy efficiency improvement investments for county facilities, such as LED lighting upgrades, energy efficient boilers, etc.
- Water conservation improvements
- Purchase of new or upgraded equipment that will improve the overall efficiency of facilities and reduce greenhouse gas emissions, reduce the use and disposal of toxic products, reduce maintenance costs and/or staff time using the equipment, and/or facilitate better tracking, measurement, and verification of sustainable outcomes in county operations

Application and Submission Information:

Apply electronically to Lisa MacKinnon at Mackinnon@countyofdane.com and Travis Myren at Myren@countyofdane.com.

Please include the following in your application:

- 1) A detailed description of your proposed project
- 2) How the project, if carried out, will meet the sustainability principles
- 3) How the county might build upon the sustainability outcomes of the proposed project
- 4) How your department intends to track and measure the outcomes of the project, such as cost savings, energy reductions, maintenance reductions, etc., if funded, and who will be responsible for measurement and verification.
- 5) Budget Sheet: Include all costs of achieving the objectives of the project.
- 6) Projected cost savings to the county due to implementation of the project.

Questions are to be directed to Travis Myren 366-4519, Lisa MacKinnon at 267-1529, or Jan Neitzel-Knox at 266-4029.

Project Information:

Department: Land and Water Resources (LWR) Parks Division Address: 5201 Fen Oak Drive Madison, WI 53718	Total project costs: \$31,069
	Funding amount in current budget: \$0
	Funding amount requested: \$31,069
Project Title: Park Facilities Sustainability Initiatives- Porous Parking Lot Paving	
Project Location: Lake Farm County Park 3113 Libby Road Madison, WI 53711	
Project Description: The Parks Division is planning to construct a trailhead parking lot to provide safe and convenient access to the Lower Yahara River Trail (LYRT) and Capital City Trail, which runs through Lake Farm County Park. Phase 1 of this trail is scheduled to open on June 1st, 2017 and will link Madison to McFarland. Ultimately the LYRT will extend to Stoughton and will be a destination for both casual users and commuters. It will encourage people to walk or bike to their destinations, rather than drive, and reduce the amount of fossil fuels used and resulting pollution generated. There is currently no designated parking for the Lower Yahara River Trail where users can access the trail. This lot will provide both access and trail/park information at a kiosk. The Parks Division is planning to use a porous asphalt pavement for this parking lot. Porous paving allows for water infiltration which reduces stormwater run-off, filters out suspended solids, preserves stream baseflow, and contributes to groundwater recharge. The area that the parking lot will be constructed in drains to Nine Springs Creek, which then empties into Upper Mud Lake. Using a porous pavement will reduce any impact this parking lot has on the watershed while serving as a visible example of sustainability for the public.	

Describe how the proposed project moves the county toward meeting the following Sustainability Principles. (See the guiding questions in the box below.) Responses to this section will be used to determine the relative level of sustainability for each project.

- Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;

The trailhead parking lot will provide convenient access to the Lower Yahara River Trail and connecting trail systems. This will encourage people to use alternative transportation modes, such as walking or biking, instead of driving. Overall this will help reduce the demand for fossil fuels in Dane County and the associated pollution.

The porous asphalt pavement proposed for this parking lot allows water to infiltrate; this is achieved by reducing the amount of sand and fines in the asphalt mixture. This means that less sand and other materials will need to be mined. Also, using a porous asphalt mix can help divert waste from local landfills, as it can contain recycled materials such as ground rubber from vehicle tires, polyester fibers from discarded carpeting, and even recycled asphalt.

- Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;

Asphalt is a petrochemical product, however when applied as a porous mix the expected lifespan of the paving is increased. Porous asphalt allows water to drain through the paving, and without the moisture remaining on or in the pavement, the damage done by freeze/thaw cycles is minimized. A typical parking lot has an estimated life of about 15 years, while a porous lot can last more than 30 years. Using porous asphalt paving will cut down the use of petrochemicals through the reduced need for patching and replacement.

- Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems);

Porous asphalt paving is designed to allow for water infiltration which reduces stormwater run-off, filters out suspended solids, preserves stream baseflow, and contributes to the recharging of groundwater. The area which the LYRT trailhead parking lot is located in drains to Nine Springs Creek and then on to Upper Mud Lake and the chain of lakes. Using porous paving will minimize the impact of the parking lot both in the immediate vicinity and also downstream.

- Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.

The porous asphalt paving will reduce the county's use of petrochemical products and reduce stormwater runoff while increasing groundwater recharge. Furthermore, people will be encouraged and motivated to use alternative means of transportation by providing convenient access to the trails, which will reduce fossil fuel use and the associated pollution.

Include in your description any estimated reductions of CO₂ equivalent emissions related to your proposal. Please use the following calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

Describe how the county might build upon the outcomes of the proposed project to work toward greater sustainability.

Lessons learned and experienced gained from installing a porous parking lot at Lake Farm County Park will improve our understanding and allow us to be informed when implementing future projects. Furthermore, the information can be shared with other departments and other parks departments that are interested in constructing similar projects.

Describe how your department will track and measure outcomes of the proposed project (i.e., annual cost savings, annual energy savings, resource use reductions, maintenance reductions, etc.). Include a timeline for measurement and reporting outcomes, and the staff member contact who is responsible for conducting the tracking and measurement.

The project will be inspected annually, via an observation well and underdrain(s), to ensure that the subsurface drainage feature is operating correctly. The pavement will also be visually inspected as needed to ensure that there is no debris build-up, obstruction, issues with pavement condition (settling, deforming, cracking) or surface ponding.

Contact person:
Chris James

Phone:
(608) 224-3763

E-mail:
james@countyofdane.com

Appendix

Material Costs

Sustainability Item	Item Number	Unit Cost	Number of Units	Cost
Porous Asphalt Paving	1	\$110	200 tons	\$22,000
Permeable Stone Base Material	2	\$25	185 cu yd	\$4,625
Geotextile Fabric Underlayment	3	\$4	1,111 sq yd	\$4,444
			Total	\$31,069

Estimated Reductions in Runoff

Annualized Yearly Totals		
	Runoff Volume (cu. ft.)	Particulate Solids (mg/L)
Impermeable Pavement	17,122.4	139.0
Proposed Porous Asphalt	436.1	1.131
Percent Reduction	97.45	99.19