



## Environment and Natural Resources Trust Fund

M.L. 2020 Approved Work Plan

### General Information

**ID Number:** 2020-069

**Staff Lead:** Rory Anderson

**Date this document submitted to LCCMR:** August 13, 2021

**Project Title:** Yes! Students Take On Water Quality Challenge II

**Project Budget:** \$199,000

### Project Manager Information

**Name:** Shelli-Kae Foster

**Organization:** Prairie Woods Environmental Learning Center

**Office Telephone:** (320) 354-5894

**Email:** shelli-kae@yesmn.org

**Web Address:** <http://www.prairiewoodselc.org>

### Project Reporting

**Date Work Plan Approved by LCCMR:** August 13, 2021

**Reporting Schedule:** April 1 / October 1 of each year.

**Project Completion:** July 31, 2023

**Final Report Due Date:** September 14, 2023

### Legal Information

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 05g

**Appropriation Language:** \$199,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with Prairie Woods Environmental Learning Center to mobilize local watershed stewardship efforts in approximately 20 communities through student-driven action projects.

**Appropriation End Date:** June 30, 2024

## Narrative

**Project Summary:** Students from YES! teams in over 20 communities will help fill the urgent need for citizen participation to protect and clean-up Minnesota waters through hands-on youth-led water related action projects

**Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

Youth Eco Solutions (YES!) teams will mobilize local watershed stewardship efforts in over 20 communities and help fill the urgent need for broad citizen participation to protect and clean-up Minnesota waters. Completing over 1,400 ecological action projects since 2007, YES! has empowered youth to be active contributors to real solutions by mobilizing their communities.

Starting in 2018, YES! shifted its experiential learning opportunities to a clear focus on water quality, completing over 50 water related projects. As one student commented, “I learned the power of what just 5 people can do to make a difference in my community.” Training more students to engage their communities in water stewardship efforts helps ensure citizens are informed and valuable water quality knowledge and data is acquired to benefit Minnesota’s waterways. Student teams will receive hands-on training from local professionals in the areas of aquatic invasive species (AIS), water quality monitoring and water quality improvements and extend their skills through real-world projects in their communities. Projects may include AIS and water quality testing, reporting and monitoring; water conservation techniques; Adopt-a-Drain; solar boat design and build; prairie, lakeshore and habitat restorations; and community awareness events.

**What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

PWELC is seeking \$199,000 to implement the 3-Step Water Awareness method developed during Phase I which includes: 1) student and coach orientation to aquatic invasive species (AIS) and training in water quality surveying techniques, 2) student-driven surveying and monitoring of local waterbodies, and 3) completion of student-led action projects and organized public education events. This project is a triple win for Minnesota – youth acquire water quality knowledge, skills and career exposure; communities become more engaged and aware; and the state gains valuable data from its waterways.

During Phase I, the number of water quality related projects completed by students more than doubled from 12 to over 50! These projects will serve as models for Phase II including: water quality testing and evaluation, public events and peer education, planting rain gardens, lakeshore and river restoration and clean-up, storm water awareness, building aquaponics systems, AIS monitoring and reporting, tracking of water usage, and designing and building of solar boats to demonstrate water pollution prevention. Project Guides created by teachers will provide models and resources for projects in Phase II. YES! will work in partnership with Ney Nature Center and Laurentian Environmental Learning Center to engage Minnesota’s youth statewide.

**What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state’s natural resources?**

Through this project, YES! seeks to protect, conserve and preserve Minnesota’s water quality by achieving the following project outcomes:

- Complete 30 or more new student-driven water quality and citizen science projects and public events
- Mobilize over 200 youth and 2,000 or more community members from 20 communities in local water quality issues
- Improve up to 20 valuable Minnesota water bodies by monitoring, testing, and reporting data. Data will contribute to the DNR EDDMapS
- Partner with local experts to provide 10 customized water quality workshops and trainings
- Recognize accomplishments through statewide Water Quality Stewardship competition/award

## Project Location

**What is the best scale for describing where your work will take place?**

Statewide

**What is the best scale to describe the area impacted by your work?**

Statewide

**When will the work impact occur?**

During the Project

## Activities and Milestones

### Activity 1: Recruit, Educate, and Train YES! Students in the 3-step Water Awareness model

**Activity Budget:** \$81,365

**Activity Description:**

Building on our past experience, YES! students will learn from local and state water quality experts to complete up to 20 water quality and conservation projects over 2 years. In order to raise community awareness of water quality best practices in the local community, students will participate in the 3-step Water Awareness method and identify challenges in their community.

YES! Coordinators recruit new YES! teams and retain existing teams to complete water quality projects. By partnering with local water quality experts to put on a Fall Summit and up to 2 workshops per region, YES! students will receive training in aquatic invasive species (AIS) testing and reporting, Adopt-A-Drain, citizen science, water stewardship, shoreline and buffer restoration best practices. Training will include hands-on identification of aquatic invasive species, how to correctly use water quality measurements such as a Secchi disk, how to accurately record water temperature, and how to identify what watershed they are located in. After training is completed, students educate community members about water quality issues and select and complete one or more water quality projects. Specific metrics will be developed for each water quality project. Some workshops may be delivered virtually in order to reach more students.

**Activity Milestones:**

Description	Completion Date
Recruit 200 students in over 20 communities to select water quality projects over 2 years	November 30, 2022
Educate and train 20 YES! teams through customized water quality workshops over 2 years	April 30, 2023
Evaluate project impact by number of students, community members and volunteers participating.	June 30, 2023

### Activity 2: Take Action! Over 30 New Student Driven, Hands-on Water Quality and Conservation Projects and Public Events Completed in Minnesota

**Activity Budget:** \$117,635

**Activity Description:**

YES! will mobilize over 20 YES! student-driven teams (200+ students) in partnership with local watershed experts to implement the 3- Step Water Awareness method which includes: 1) student and coach orientation to aquatic invasive species (AIS) and training in water quality and conservation techniques, 2) surveying and monitoring of local water bodies and prairies, student-drive completion of 30 new eco action projects, and 3) student organized public education events to promote community awareness to protect and improve local water quality.

YES! coordinators work with local experts to support YES! teams and their projects, organize community events, and supply water crafts for on the water activities. YES! teams assess needs in their communities and schools, evaluate and help find local resources to meet these needs, and create an action plan to implement their projects with the support of their adult coach, YES! staff, and local water experts. Projects topics may include: Adopt-a-Drain, AIS testing and monitoring of local water bodies, citizen science, Secchi disk readings, shoreline. prairie and habitat restoration and clean up, educational events, visits to water treatment facilities and landfills, and solar boat design and build. We will recognize exemplary work by awarding the Watershed Stewardship award each year.

**Activity Milestones:**

Description	Completion Date
Engage over 20 YES! teams to select local water quality projects over 2 yrs	November 30, 2022
Mobilize over 200 students to develop action plans and complete over 30 new water over 2 years	June 30, 2023

Partner with local watershed experts to implement the 3-Step Water Awareness method 20 communities	June 30, 2023
Recognize student achievements through the annual Water Quality Stewardship award	June 30, 2023

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Becky Pollack Executive Director	Ney Nature Center, Henderson, MN	Ney Nature Center will be a program partner to facilitate YES! in the southern region by serving as a host site for YES! events, providing oversight to the southern YES! coordinator, processing billing and to ensure the ENRTF project outcomes are met.	Yes
Karl Brown, Executive Director	Laurentian Environmental Center in Britt, MN	Laurentian Environmental Center will be a program partner to facilitate YES! in the northeast region by serving as a host site for YES! events, providing oversight to the northeast YES! coordinator, processing billing, and to ensure the ENRTF project outcomes are met.	Yes
Jonathan Morales, Water Technician	Middle Fork Crow River Watershed District (MFCRWD)	MFCRWD will be a collaborator in providing local expertise in water quality and conservation best practices. Morales and others will share their expertise at YES! events and workshops in order to train and prepare students to do water quality testing and to implement conservation practices.	No
Water Technician	Sauk River Watershed District (SRWD)	SRWD will be a collaborator and we will look to their water quality experts on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR for training and expertise.	No
Marte Kitson, Environmental Literacy Extension Educator	Minnesota Sea Grant Program	Sea Grant will be a collaborator and serve as a local expert in water quality and conservation best practices especially as it relates to Lake Superior and its tributaries. Kitson may present at northeast workshops and events to train students so they can do their testing of local waterways.	No
Bill Grantges	Itasca County Soil and Water Conservation District	Grantges serves as the Itasca County Aquatic Invasive Species Program Coordinator. The SWCD will be a collaborator and Grantges may serve as a water quality expert providing training on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR.	No
Students and Teachers	School Districts in Minnesota	Will be a partner to support youth in participating in water quality projects. Funds will support project seed funds.	Yes
University of Minnesota	Aquatic Invasive Species Department	Will be a collaborator and provide expertise, resources and training.	No
County AIS Coordinators	County Departments	County AIS Coordinators can serve as a water quality expert providing training on aquatic invasive species (AIS), seechi disc reading techniques and water testing for compounds that can be reported to the DNR.	No
Volunteers	Lake Associations	Lake association may be a collaborator and serve as volunteer support for projects.	No
Kimberly Musser	Water Resources Center at Minnesota State University - Mankato	Will be a collaborator for connecting teams to water data and experts in the Minnesota River Basin	No
Lee Ganske	MN Pollution Control Agency	Ganske is the Surface Water Monitoring Coordinator. MPCA will be a collaborator by supporting students collecting data to monitor water quality.	No
Brooke Hacker	MN DNR	Hacker is the Regional Clean Water Legacy Specialist. MN DNR will be a collaborator as a resource for students doing projects related to hydrology in southern MN.	No

Erik Cedarleaf Dahl, Planning Director	Environmental Quality Board (EQB)	Dahl works in policy and rule making for the EQB. He recently researched and wrote the 2020 Water Quality Plan for Minnesota. He was a featured workshop presented for YES! in 2020.	No
--	---	--	----

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**

Information, updates and reports will be made available via the YES! website ([www.yesmn.org](http://www.yesmn.org)), YES! e-newsletter (3 times/year), Prairie Woods newsletter (Warbler), Laurentian Environment Center, and Ney Nature Center newsletters and websites. YES! produces an annual Team Accomplishments featuring highlights from the year. YES! will present at opportunities such as Earth Day events, MN Science Teachers Association, SciMathMN, and conferences and other relevant events. Project accomplishments are recognized and publicized via website, newsletters, conference presentations and local, regional and state-wide news media.

## Long-Term Implementation and Funding

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?**

YES! has completed its 14th year by leveraging over \$1.5 million in local support of projects in the form of in-kind contributions, matching funds, major grants, and volunteer hours. In addition, YES! will seek private and public partnerships, fundraisers, and sponsorships. YES! provides teams with a Team Funding Toolkit.

The results from this project will leave a lifetime legacy of improved waterways and informed citizens through the various water quality improvement and conservation projects.

Other past supporters of YES! include McKnight, Bush Foundation, Initiative Foundations, Waste Management, LYFT Career Pathways, CERTs, businesses, utilities, corporate sponsorships, and individual donors.

## Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Youth-led Sustainability Initiatives in 40 Greater Minnesota Communities	M.L. 2014, Chp. 226, Sec. 2, Subd. 09b	\$350,000
Youth-Led Sustainability Projects in 50 Minnesota Communities – Phase III	M.L. 2016, Chp. 186, Sec. 2, Subd. 05c	\$400,000
YES! Students Take on Minnesota Water-Quality Challenge	M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05b	\$213,000

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Project Manager		To manage project budget, reporting and staff to achieve desired project outcomes and lead water quality and conservation projects with youth teams in Northwestern/Central MN.			25%	1.3		\$84,300
Regional Coordinator		To coordinate and lead Water Awareness & Water Quality Project initiatives in West Central Minnesota.			25%	0.7		\$30,000
Office Manager		To provide bookkeeping, process payroll, project seed fund distributions and other office duties			25%	0.24		\$10,400
							<b>Sub Total</b>	<b>\$124,700</b>
<b>Contracts and Services</b>								
Ney Nature Center	Sub award	To facilitate Water Awareness Method, connect teams of youth with local water quality experts and support hands-on student-driven water quality/conservation and ecological projects in southern Minnesota.				0.5		\$26,000
Laurentian Environmental Center	Sub award	To facilitate Water Awareness Method, connect teams of youth with local water quality experts and support hands-on student-driven water quality/conservation and ecological projects in northeastern Minnesota.				0.5		\$26,000
							<b>Sub Total</b>	<b>\$52,000</b>
<b>Equipment, Tools, and Supplies</b>								
	Tools and Supplies	Supplies for events, workshops and water quality award. Boat rental as needed in some regions. In many regions, boats will be provided through in-kind support.	To enable water quality education and testing with students across Minnesota					\$1,080
							<b>Sub Total</b>	<b>\$1,080</b>
<b>Capital Expenditures</b>								



							<b>Sub Total</b>	-
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								
	Miles/ Meals/ Lodging	Coordinators & Project Manager travel: 500 miles/month x 24 months = 12,000 miles x .56 = \$6,720	Travel required to support and meet with teams and partners and to coordinate activities in over 20 communities across Minnesota.					\$6,720
							<b>Sub Total</b>	<b>\$6,720</b>
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
		Project Seed Funds; Up to \$400 per team x 10 teams = \$4,000 x 2 years = \$8,000.	Allows for teams to purchase materials and services necessary to initiate projects for water quality and conservation related projects, events, and event registrations to raise awareness, monitoring, testing and reporting.					\$8,000
		School District/Community Expense allowance	To facilitate student participation, funds will be available for reimbursement to support: 1. Substitute teachers to allow YES! coaches/adult advisors to attend YES! events during the school day, and 2. Transportation expenses for buses or					\$6,500

			vans for students and coaches/adult advisors to travel to events.					
							<b>Sub Total</b>	<b>\$14,500</b>
							<b>Grand Total</b>	<b>\$199,000</b>

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
---------------	---------------------	-------------	--

## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
Cash	LYFT Career Pathways, a program of Southwest West Central Service Cooperative has committed \$25,300 to Prairie Woods Environmental Learning Center. Launch Your Future Today (LYFT) is a rural career and technical education (CTE) pathway initiative with the purpose of rebuilding CTE in southwest and west central Minnesota. The goal of LYFT Pathways is for every secondary student in the region to gain marketable skills through meaningful CTE courses and opportunities which lead to further education and careers that match our region's labor market needs.	The funds will be used to support YES! staff time and travel to provide new opportunities for students in SWWC Minnesota including 1) Green Career workshops and 2) the implementation of an "Eco-Solutions" program rotation at PWELC.	Secured	\$25,300
			<b>State Sub Total</b>	<b>\$25,300</b>
<b>Non-State</b>				
Cash	Each participating YES! team pays a fee of \$600. We estimate 20 schools will participate in the school years of 2021-2022 and 2022-2023. These are teams that are specifically participating in water related projects. YES! may have up to 30 teams each year. 20 x 2 years = 40 teams total x \$600 = \$24,000	Participation fees cover costs not eligible for reimbursement from ENRTF and additional needed support such as staff, travel, food for events, t-shirts, and office supplies.	Potential	\$24,000
In-Kind	In-kind from Prairie Woods Environmental Learning Center and our partners Ney Nature Center and Laurentian Environmental Center.	PWELC \$24,000 + LEC \$5,000 + NNC \$ 10,000 for 2 years = ; Student volunteer time average is 327 hrs per team x 20 teams for 2 yrs at \$13/hr = \$85,400; Teacher volunteer time average is 98 hrs per team x 20 teams for 2 yrs at \$35/hr = \$68,600; Professional/expert volunteer time average is 33 hrs per team x 20 teams at \$45/hr = \$29,700. Above in-kind is based on past history of previously quantified data.	Potential	\$222,700
			<b>Non State Sub Total</b>	<b>\$246,700</b>
			<b>Funds Total</b>	<b>\$272,000</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [2f57e1dc-550.pdf](#)

#### *Alternate Text for Visual Component*

The visual illustrates the project's goals to complete 30 new student-driven water quality projects, engage and train over 200 youth in 20 communities about local water related issues and improve 20 or more valuable Minnesota water bodies. The visual includes photos of students in kayaks during a paddling sessions to monitor local lakes for aquatic invasive species (AIS), students during a rain garden planting workshop and students stenciling stormwater drains to educate the public on the imp...

#### *Financial Capacity*

File: [fc182901-0d2.pdf](#)

#### *Board Resolution or Letter*

Title	File
PWELC Board Resolution Letter	<a href="#">3b1828ff-d9a.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
LEC Letter of Commitment_2020	<a href="#">a4db8b66-a7e.pdf</a>
NNC Letter of Commitment_2020	<a href="#">ad4c4d8f-ec4.pdf</a>
Forest Lake_Letter of Support	<a href="#">319c4574-538.pdf</a>
Discovery Woods_Letter_of_Support	<a href="#">cb35b658-7c0.pdf</a>
DREAM Academy_Letter_of_Support	<a href="#">ee9f2431-a4f.pdf</a>
Sleepy_Eye_Letter_of_Support	<a href="#">34cfeb83-f70.pdf</a>
Mankato_West_Letter_of_Support	<a href="#">74339aa0-b43.pdf</a>
New London-Spicer_Letter_of_Support	<a href="#">8fd2e9e0-d76.pdf</a>
Northern_Lights_Community_Letter_of_Support	<a href="#">bc14383e-d3a.pdf</a>
New Prague_Letter_of_Support	<a href="#">e19ba73a-d45.pdf</a>
Wrenshall_Letter_of_Support	<a href="#">824363e8-332.pdf</a>
YES! 2019-20 Team Accomplishments	<a href="#">ae8ce931-d81.pdf</a>
YES! 2018-19 Team Accomplishments	<a href="#">b99a69de-eba.pdf</a>
YES! 2020-21 Team Accomplishments	<a href="#">acb04c9f-1ff.pdf</a>
Background Check Certification	<a href="#">9e2968a4-59e.pdf</a>

#### *Media Links*

Title	Link
YES! (Youth Eco Solutions)	<a href="http://www.yesmn.org">www.yesmn.org</a>
Mankato West interview with KMSU radio in Mankato	<a href="https://soundcloud.com/kmsu/youth-eco-solutions-yes-06172021?in=kmsu/sets/earth-week-2021">https://soundcloud.com/kmsu/youth-eco-solutions-yes-06172021?in=kmsu/sets/earth-week-2021</a>

## Difference between Proposal and Work Plan

### *Describe changes from Proposal to Work Plan Stage*

Only minor changes were made to the work plan from the original proposal such as reviewing and updating project collaborators, reviewing and updating milestones and completion dates. Staff comment ID #862 and #863 have been revised and completed. Three new attachments were added to demonstrate the potential of student-driven projects for this project including our 2018-19, 2019-20, and 2020-21 Team Accomplishments.

## Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

**Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?**

N/A

**Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

Yes, I agree to the Commissioner's Plan.

**Does your project have potential for royalties, copyrights, patents, or sale of products and assets?**

No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

N/A

**Does your project include original, hypothesis-driven research?**

No

**Does the organization have a fiscal agent for this project?**

No

## YES! Students Take on Water Quality Challenge – Phase II

*Building on the successful YES! model, YES! will bring the 3-Step Water Awareness method to over 200 students to improve over 20 Minnesota water ways while partnering with over 2,000 community members and businesses*

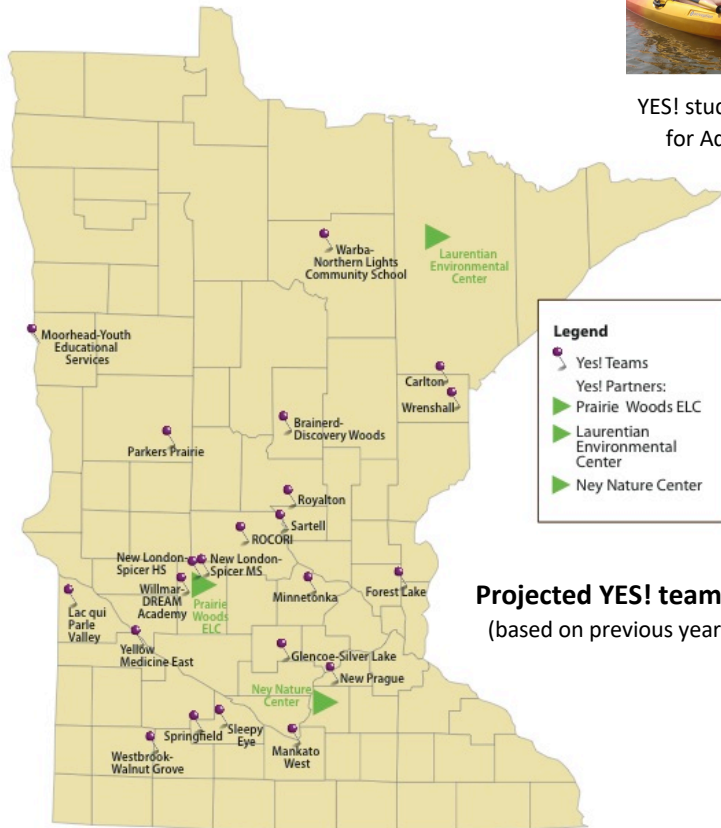


YES! students monitor Lake Ringo for Aquatic Invasive Species



YES! students planting a rain garden in Stearns County

- Complete 30 new student-driven water quality projects
- Engage and train over 200 youth in 20 communities about local water related issues
- Improve 20 or more valuable Minnesota water bodies



**Projected YES! teams for 2021-23**  
(based on previous years participation)



YES! students stencil storm drains around Forest Lake community

“What’s great about storm drain stenciling is that it sends a message that will reach a diverse and large number of community members. I took part in the project because there’s value in maintaining a healthy watershed”  
-Forest Lake YES! student

### Projects Completed During Phase I (Year 1 of 2 year project data)

- 5 water quality testing and evaluation projects
- 4 water-related educational events and peer lessons
- 4 rain gardens designed and planted
- 3+ local lakeshores and rivers cleaned
- 3 storm water collection and reuse projects
- 2 aquaponics systems built
- 2 AIS lake monitoring and reporting projects
- River monitoring and data collection
- Shoreline restoration
- 15 storm drains stenciled
- Water usage tracking
- Adopt-A-Drain awareness
- Native garden & restoration

