

Fire-smart Landscaping: A wildfire prevention homeowner education partnership

Steven Swain, Fay Mark, David Lewis, and UC Marin Master Gardeners

Background

Home gardens and residential property are a significant footprint in any landscape. Like soil is the interface between the atmosphere and underlying geology, home gardens are the bridge connecting built and natural environments. Individual homeowners, residents, and hired professionals tending these gardens are critical partners, perhaps keystone partners, to successfully achieve multiple and integrated management objectives and benefits across the large-scale, complex wildland urban interface. Fire fuel reduction and wildfire prevention from the home out are two of these landscape management objectives.

Homeowners and residents are making landscaping decisions based upon their values for their property, their understanding of broad landscape objectives, and appreciation for their property's connectedness to other private parcels and public lands. The University of California Cooperative Extension Marin County (UCCE Marin) and the University of California Marin Master Gardeners (MMG) are go-to sources for research-based science information and education for Marin homeowners and landscape care professionals. Through our programs, we have expanded homeowner awareness of the larger landscape to which their properties and gardens are connected. Complementing this awareness, we provide homeowners and landscape professionals practical garden and landscape approaches to improve habitat, protect watersheds and water quality, and increase the quality and quantity of cultivated fruits and vegetables.

We have been aggressive and productive in our Fire-smart Landscaping (FSL) program to raise awareness about fire and landscape connections and provide homeowners and professional landscapers science-based landscape choices to manage vegetation that are critical for wildfire prevention. FSL is part of the University of California Agriculture and Natural Resources (UCANR) team and network of fire and natural resource scientists and educators. The FSL program team coordinates and shares resources with the statewide UC Master Gardener Program and locally with UCCE Sonoma Master Gardener counterparts. Most importantly, FSL is integrated with the Marin Wildfire Prevention Authority and FIRESafe Marin, including the Ecologically Sound Practices Partnership. Accordingly, we are the core partner for providing holistic and comprehensive environmental horticultural expertise and education to prevent wildfire in home landscapes.

Homeowner Education

Our team and partnership have done an impressive and impactful job to ramp up resources online (http://marinmg.ucanr.edu/Fire-smart_Landscaping/), develop education materials (see [Fire-Smart Landscaping](#)), publish educational articles in local media, and deliver a speaker series. Examples of our reach to date include:

- 800 plus participants in our speaker series presentations, including remote and virtual delivery during COVID-19;

- 3,000 views of our 2020 educational videos;
- 132,000 readers through our Marin IJ 2020 feature articles and IJ Garden Tips;
- 31,500 contacts through our social media and city newsletter efforts (NextDoor, Facebook, others); and
- 4,500 newsletter subscribers per month through our educational content contributions to FIRESafe Marin.

This has been accomplished through considerable volunteer contributions and leadership and the borrowing of staff resources from other programs.

Goals and Objectives

Vegetation management and defensible space education to prevent wildfire is not an event. It does not happen overnight. It is a process and long-term commitment to establishing and communicating vegetation management principles and practices to property owners, landscape designers, installers and maintenance personnel. Accordingly, there is need and opportunity to maintain the momentum and grow the footprint and reach of our partnership and program. This needs to be done home by home and garden by garden, so that fire-smart landscaping is connected across property lines, from front door to front door. It is through this scaling up and connectivity of managed landscapes that wildfire prevention can be achieved.

We are seeking support to recruit a full-time project coordinator to scale-up the FSL program delivery who will fulfill the following roles and objectives:

- Lead a team of FSL volunteers to develop and deliver up-to-date science-based information from UCANR and UCCE subject matter experts on FSL using a variety of MMG education outreach channels for property owners.
- Further develop existing communications infrastructure and processes to deliver FSL content to Marin property owners to meet their learning styles and time limits.
- Accelerate and increase timely and broad distribution of educational information to the home/property owner through presentations, websites (state and local), videos, social media (Facebook, NextDoor, Instagram), publications (Marin IJ, newsletters), demonstration gardens, Farmers Markets, MMG Garden Walks, and MMG Help Desk support.
- Arrange monthly speaking engagements through libraries, FIRESafe Marin webinars, Firewise communities, city councils, gardening clubs, women's groups, Rotary Clubs, homeowners associations (HOAs).
- Facilitate a team to clearly define and agree upon defensible space landscaping requirements and recommendations, specifying what they are and how to evaluate them.
- Develop educational materials for both home/property owners and defensible space evaluators/Wildfire Mitigation Specialists (WMS) to ensure consistency on defensible space landscaping requirements and recommendations.
- Lead demonstration garden development with supporting education program in strategic, high-traffic locations.
- Work closely with agencies and groups such as FIRESafe Marin, Marin fire agencies, Marin Conservation League, Ecologically Sound Practices Partners, and MWPA.

- Coordinate the delivery of horticultural talks and outreach to interested fire agencies that are in the process of training WMS.
- Track FSL projects throughout the north bay, to facilitate the exchange of ideas, and capitalize on collaborative opportunities, particularly in other areas with historically high fire frequency and/or severity, such as Sonoma, Lake, and Mendocino Counties.

In addition to these objectives, the requested support is initial funding that will afford pursuit of additional resources and grant opportunities to continue the program. It will also facilitate research collaboration between Marin experts and officials and the fire science community.

Project Team

Our local project team includes: Steven Swain, UCCE Horticultural Advisor; David J. Lewis, UCCE Marin Director and Watershed Management Advisor; UC Marin Master Gardner Fire-smart Landscaping Steering Committee; and 350 UC Marin Master Gardener volunteers that provide service through our speakers bureau, home gardener Help Desk, and other venues. Additionally, our local team is part of the UC Agriculture and Natural Resources network of fire science educators and researchers - <https://ucanr.edu/sites/fire/>. This enables us to quickly access resources and expertise so we can connect Marin homeowners with the state-of-the-science in fire and fuels management for their landscapes and properties.

UCCE Marin and our local team have a proven track record of scaling up homeowner outreach and education that results in behavior change and vegetation management improvements. This is our mission and the reason we integrated with Marin County. Examples include the [Marin Friendly Garden Walks](#) with documented reductions in water use in more than 1,500 private home gardens and the [Marin Knotweed Action Team](#) resulting in successful management of a Class A invasive weed on private parcels within the San Geronimo Valley Watershed.

Project Timeline

The draft timeline assumes a start date coinciding with the start of the 2021-2022 fiscal year, July 1, 2021. The timeline could be advanced based upon timing of any potential award and modified to meet specific annual fire season needs and responses for homeowner education.

Task*	<u>Year 1 (2021-2022)</u>												<u>Year 1 (2022-2023)</u>											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
1. Onboard Program Coordinator: Orientation to local UCCE team, introductions and workplan confirmation with MWPA, FireSafe Marin, and ESP partners. Integrate with existing homeowner education program.	■																							
2. Deliver homeowner educational content: Coordination, development and delivery of homeowner wildfire prevention education program and training in collaboration with partners and UCCE local team.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
3. Delivery landscape professional education: Targeted development and delivery of wildfire prevention education program and training for this audience of service providers.								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
4. Collaborate on WMS training: Engage and contribute complementary content and support for WMS training. Specifically, environmental horticulture and landscape management approaches to prevent wildfires.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
5. Network with partners and HOA's: Building upon onboarding steps, continue to connect and integrate with audience and partner affiliation groups.													■	■	■	■	■	■	■	■	■	■	■	
6. Identify information gaps: Working with partners, identify information and knowledge gaps in wildfire prevention education materials and programs.																								
7. Gather science to fill information gaps: Gather science and research-based information to fill identified information gaps with local partnership and broader fire science community.																								

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	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
8. Develop educational materials addressing gaps: Integrate gathered science and research-based information into the existing and novel educational materials and programs.																								
9. Demonstration garden development: From conception to development to education, collaborate with demonstration garden partners to realize its education potential for homeowners.																								
10. Identify knowledge gaps: Using the network of fire science expertise, share knowledge gaps that require additional analysis and investigation.																								
11. Collaboration and funding opportunities: Identify additional and longer-term funding for educational programs.																								
12. Complete project reporting and accounting tasks																								

Notes:

*Tasks details will be developed further as part of a work plan and funding agreement.

Budget

Expenses consist of salary and benefits for a full time Community Education Specialist and Coordinator, and 5% time salary and benefits for Webmaster/Social Media support (see budget request table). Additional expenses include mileage and supplies support. Total estimated annual direct expenses are \$114,632 and \$28,658 in indirect expenses, with a two-year total request of \$286,580. Additionally, cost-share from UCCE Marin for academic and staff salary and benefits and office and telecommunications support are anticipated at 10% of total expense or \$28,658 over two years. This is in addition to UC Marin Master Gardener volunteer leadership and time contributions of approximately 1,000 hours a year, equaling a 50% part-time position.

Budget	Annual Request	2-year Total
Personnel Salary	\$66,272	\$132,544
	\$63,715 – 1.0 FTE Community Education Specialist III	
	\$2,557 – 0.05 FTE Webmaster	
Benefits	\$44,860	\$89,720
	Community Education Specialist III: \$43,129 Webmaster: \$1,731	
Travel	\$500	\$1,000
Supplies	<u>\$3,000</u>	<u>\$6,000</u>
<i>Subtotal</i>	<i>\$114,632</i>	<i>\$229,264</i>
Indirect (at 25%)	<u>\$28,658</u>	<u>\$57,316</u>
Total	\$143,290	\$286,580

Administrative Contacts

David Lewis, The Regents of the University of California, on behalf of UC Cooperative Extension, Marin County (here after referred to as UCCE Marin), 1682 Novato Blvd., Suite 150B, Novato, CA 94947; 415-473-4204; djllewis@ucanr.edu

Heidi von Geldern, UC Agriculture and Natural Resources Contracts and Grants Office, Davis, CA; hvongeldern@ucanr.edu.