



**FIRE
SAFE
MARIN**

Adapting to Wildfire



**MARIN WILDFIRE
PREVENTION AUTHORITY**

Investing in a Fire-Adapted Marin County

Annual Report 2021

Prepared on December 27, 2021

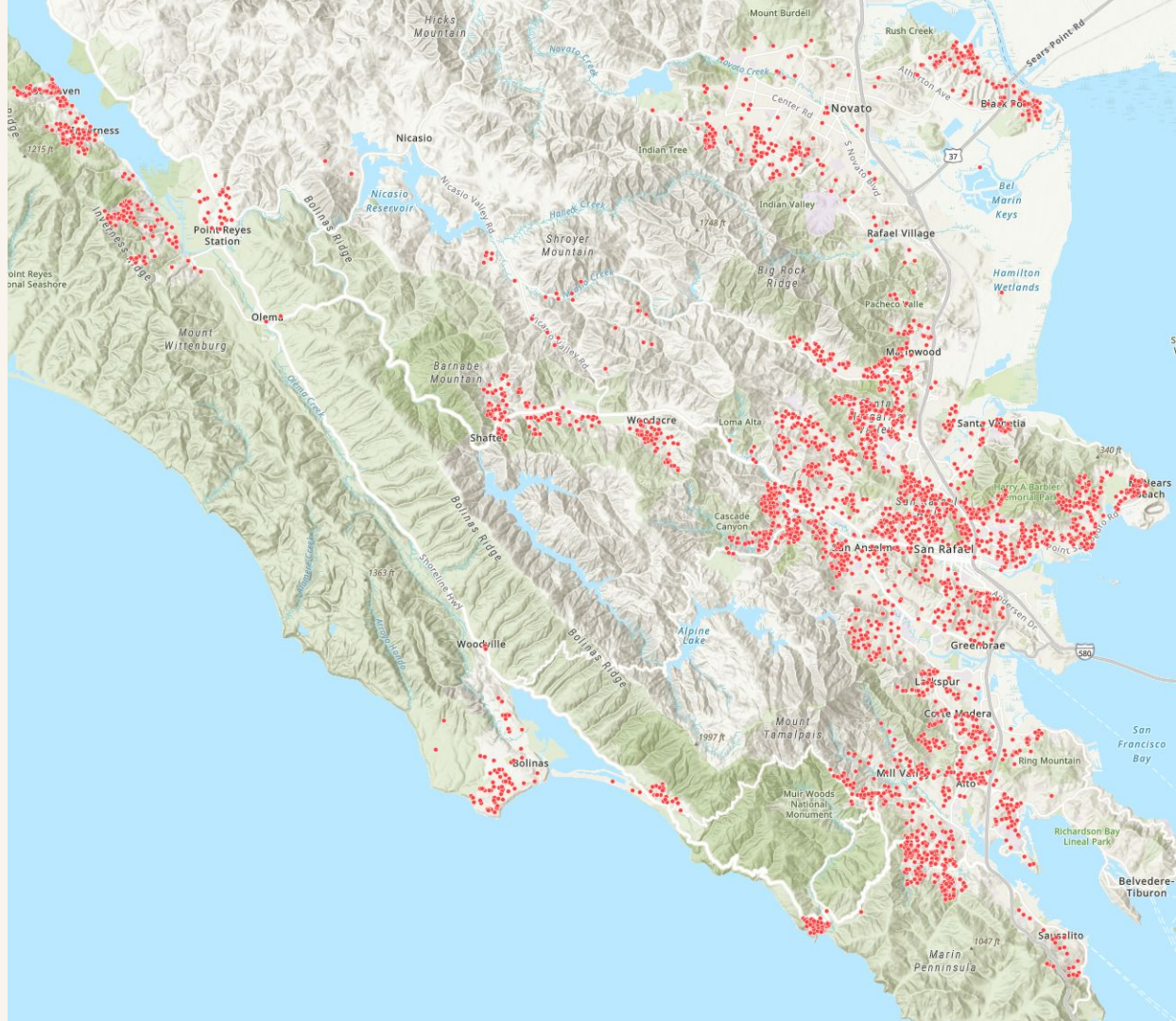
2021 Chipping Summary

14,635 cubic yards of flammable material removed.
13,000 cu yards (87%) removed because of this program

3,793 completed pickups county wide, up 40% from last year
98.7% of participants rated their experience with MWPA curb chipping as 5 out of 5

Driving investment by residents
For every \$100 spent on this program, residents spent \$75 and invested 2.4 hours of time removing fuel

Program was over 10% more efficient
Cost per pickup in 2021 decreased by 11% compared to 2020



2021 Chipper Program Overview

In FY 2020-21 the Marin Wildfire Prevention Authority (MWPA) approved two curbside chipper budget requests from Fire Safe Marin for the residents of Marin County. The first allocated \$330,000 to provide services during May and June 2021, The second request was for \$1.15 million to conduct service for fiscal year 2021-2022. The program design provided for two scheduled weeks of service for all communities within the jurisdiction of the MWPA in addition to being a resource that could be called upon by any of the 17 agencies that make up the MWPA. As was the case with the first year of the program, the aim was to be able to offer vegetation removal services equitably to all residents regardless of their location in the county in order to reduce fuel loads and subsequently, regional fire risks.

2021 saw the continuation of severe drought in the area and a very active fire season within the state of California and the greater Western United States.

As a result of this the 2021 FSM chipper program experienced elevated levels of reservations and calls from the public for additional resources to be devoted to vegetation removal during future seasons.

The introduction of coordination between Defensible Space Inspections (DSI) in many agencies with the chipper program also lead to an increase in reservations and interest in the program.

The program continued to utilize software made by the local company, Fire Aside, to great success. The ability of the software to manage and track reservations, plan the most efficient routes, and allow crews to input pile size estimates along with pile photographs was invaluable to the success of the season.

PROGRAM GOALS

FSM believes wildfire safety should be available to everyone.

Over the years, the residential chipping programs throughout the County have subscribed to a consistent list of goals. Not least of which is simply the removal of hazardous vegetation and the dissemination of prevention and safety information.

The 2021 season saw the continued commitment to the goals laid out during the 2020 season. FSM continues to strive to provide the free services of the Chipper Day Program to all residents of Marin in an equitable fashion as well as to assist in lowering the carbon footprint associated with residential cleanup and vegetation removal.

Equitable distribution of services and provide opportunity for more low income and aging residents to access the program

Reduce hazardous vegetation on residential property

Increase program participation with curbside service

Reduce environmental impact by greatly decreasing number of trips to pick up and dispose of material

Increase program visibility with improved advertising

Educate the public about the need to maintain defensible space on private property

FSM Chipper Program 2021

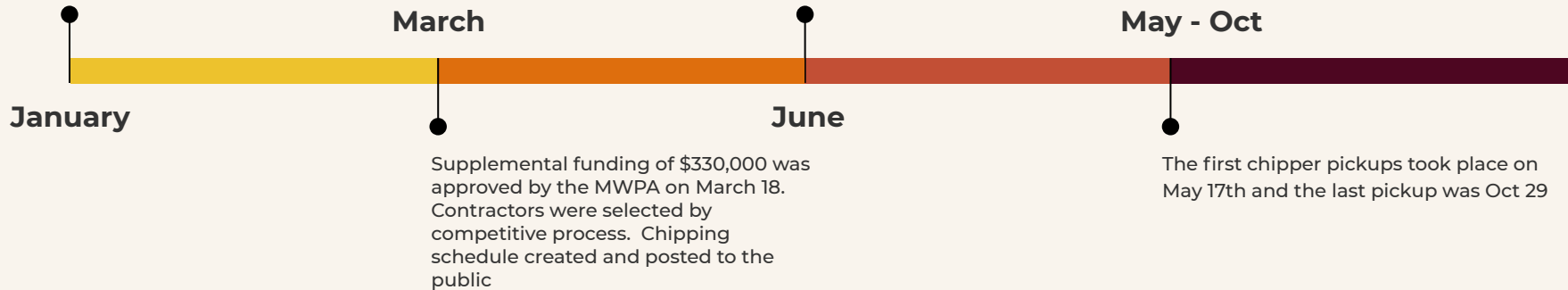
FSM Chipper Day program is designed as a curbside pickup service. The program is organized to allow for two rounds of pickups for all Marin County communities that fall within the five MWPA zones. During the 2021 season, the two rounds of chipping were between May 17th to July 30th for round one and August 16th to October 29th for round two.

The program breaks Marin County into four service zones (North, Central, West and South) and assigns one three-person crew to cover each zone during the week with the option to deploy additional crews if the need arises.

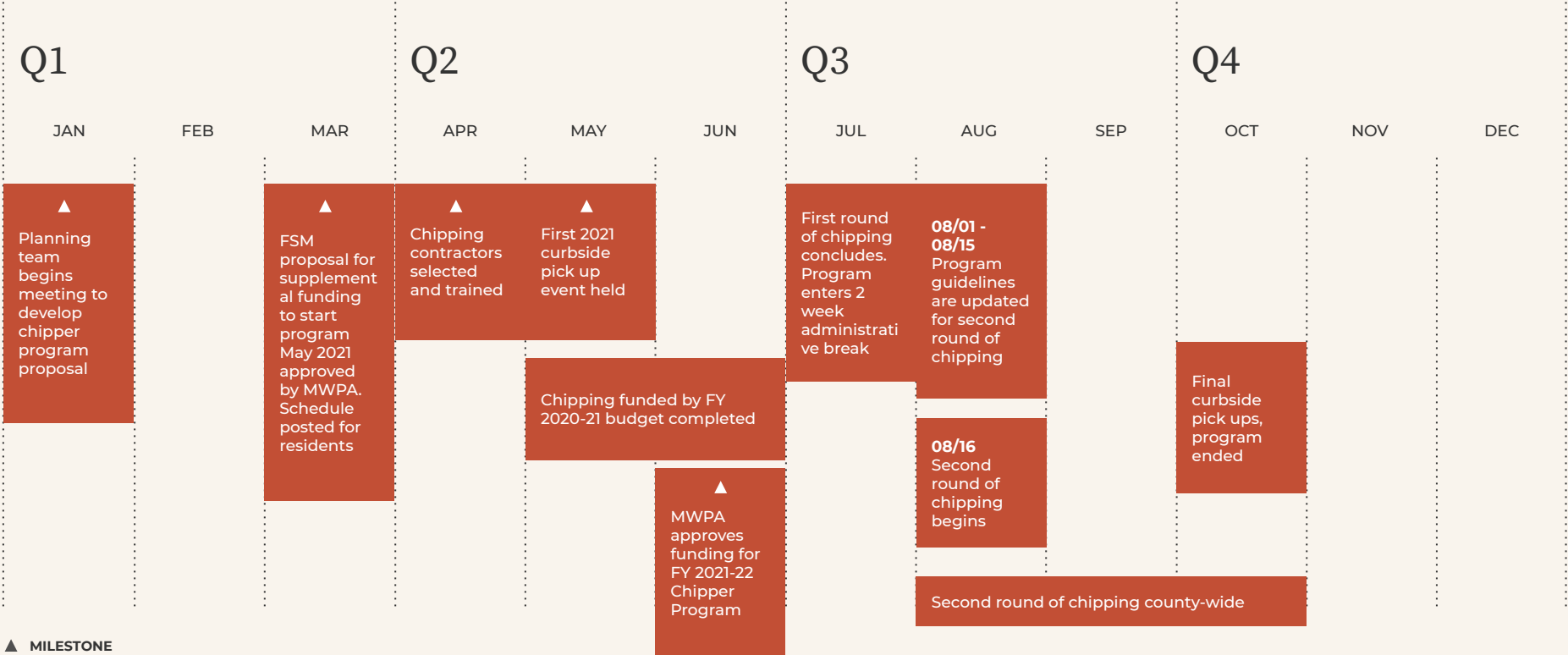
Timeline

A planning team with members from each of the 5 MWPA zones began meeting in January to develop the 2021 chipper program proposal

June 17 MWPA allocates \$1,150,000 for 2021-22 Chipper Program



Timeline & Milestones (breakdown)



▲ MILESTONE

Chipperday Software

Building on the insights from the initial year and in partnership with Fire Aside the chipping software continues to create efficiencies for program admin and residents

01

Data & reporting to enable insights by evacuation zone and other dimensions

02

Improved registration process, notifications & reminders to create an easier more accessible resident experience

Program Management

Program Management

In order to operate a curbside chipping program that covers over 90% of Marin County and serves thousands of residents every year, what is needed is:

- 1) Exceptional staff
- 2) Thoughtful planning
- 3) Great teamwork

Staff

The 2021 program was managed by Steven Peters and Brendan Devlin, two Marin County residents who are passionate about serving the community and mitigating wildfire risk. Here's a "behind the scenes" peak at what is involved in planning and operating the largest curbside chipping program in all of Northern California!

Pre-season planning

Program planning begins in January and involves the creation of a detailed proposal outlining the size, scope, and design of the upcoming year's program. Program Managers meet with local government representatives, fire officials, and members of the public to discuss logistics, answer questions, and solicit feedback.

Once the proposal is approved and funding is secured, an RFP is published and the contractor selection process begins. Program Managers collaborate with the Planning Committee to review and analyze all bids, vet the finalists, and make recommendations.

Chipping season activities

Operating the program is a 7 day a week job from mid-May until the end of October, Program Managers participated in weekly FSM staff meetings and gave weekly program updates. In addition to supervising 4 chipper crews every day during the week, Program Managers respond to thousands of inquiries from the public throughout the season. Answering questions, handling logistical "curveballs," and solving complex problems, are all in a day's work. Behind the scenes, Program Managers handle all the necessary Finance, Compliance, and Reporting functions that come with running a public program with a \$1MM+ budget. Detailed reports are created and presented at monthly meetings of the MWPA Board. Coordinating services with MWPA Member Agencies to support the overall mission of fuel reduction and marketing the program to Marin County residents are also key responsibilities handled by the Program Managers.

Program changes for 2021

Year two of Chipper Days brought a number of changes to the program's organization to allow continued expansion of service and to run as efficiently as possible.

“With a bigger cubic allowance, we would help clear neighbors' property also.”

EARLIER START:

Program's start date moved to May 17th to allow residents to proactively remove vegetation before fire season.

CONSISTENCY:

Pile size was standardized to 10'x4'x4'. This was later expanded to 15'x4'x4' as the season progressed.

COVERING ALL OF MARIN:

The program was expanded in to urban parts of Marin to offer more residents service.

IMPROVED EFFICIENCY:

Expanded partnerships with 3 disposal locations around the county to reduce miles & time on dump runs

Planning Team utilized

This season, the chipper program utilized a planning team made up from representatives from each of the 5 MWPA zones. The planning team assisted in such matters as the contractor bidding selection and the overall RFP process.

Throughout the season, they received weekly status reports as to how much vegetation had been removed and from what locations.

The assistance of the 10 person planning team was invaluable in ensuring all contractors who submitted bids received fair and equal consideration and that the final selection was based on multiple highly experienced individuals.

RFP Process

A Request for Proposal was publicly released. All chipping contractors in the area were eligible to bid on the project. Requirements for a complete bid offer included the ability to provide at least one 3 person crew per region for work between Monday and Thursday for 22 weeks.

Contractors were also required to submit equipment lists that included multiple sized box trucks ranging from 14 to 24 cubic yard capacity as well as being able to supply their own chippers. This was necessary to ensure that there was enough equipment available to provide daily service and access to small roads in the hills.

All contractors were required to supply proof of insurance and liability coverage.

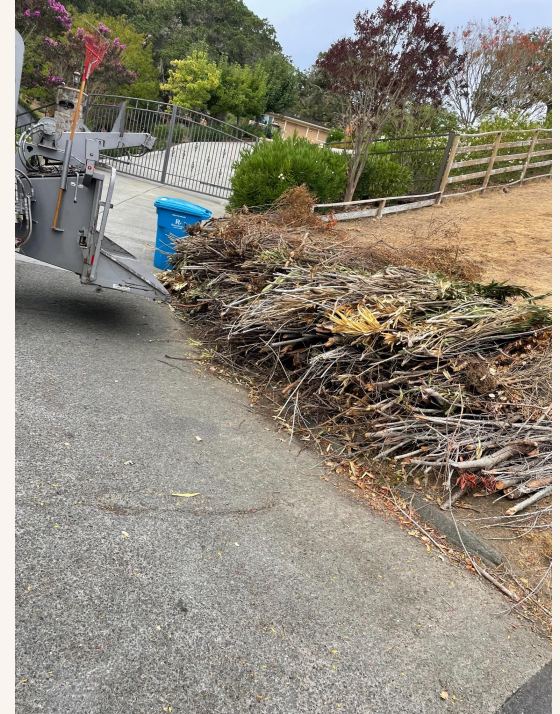
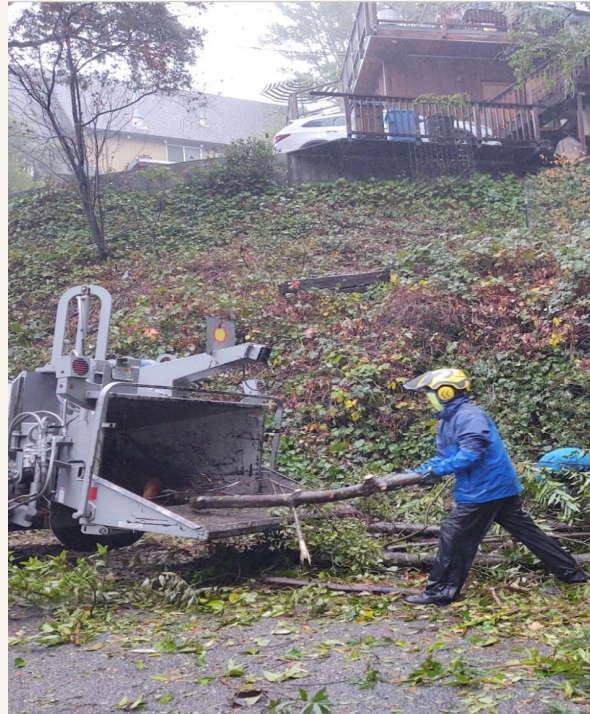
In total, FSM received bids from 7 local contractors. The planning team selected two companies to participate in the 2021 season; The Tree Man and Forster & Kroeger Landscape Maintenance, both of which performed outstandingly.



Contractor distribution and utilization

During the 22-week season, the two tree services selected as contractors were divided into four regions of Marin that the program covered. In each region, one 3 member crew was assigned to complete all reservations for the week between Monday and Thursday with Friday being an optional overflow day.

Throughout 2021 season, when one crew finished their assigned region ahead of time, the program had the flexibility to assign them to one of the other three regions to assist any crew that may have a heavier workload.





Chipper in action

Changes to community engagement and advertising

FSM continued to utilize FireWise (FW) communities for the advertising of the program within existing FW communities to boost involvement. In addition to engaging with FW communities, the program was also engaged Marin residents through informational postcards and business cards that were distributed by the Defensible Space Evaluations program at the time of their evaluations.

The MWPA also funded the creation of picket signs that were distributed by community activists in targeted neighborhoods that had upcoming weeks of service. In addition, FSM created physical postcards and business cards to be distributed to residents as well as digital media content to advertise the program, which can be found here:

<https://www.youtube.com/watch?v=R2qUSK7U9E>



FREE CHIPPER DAYS



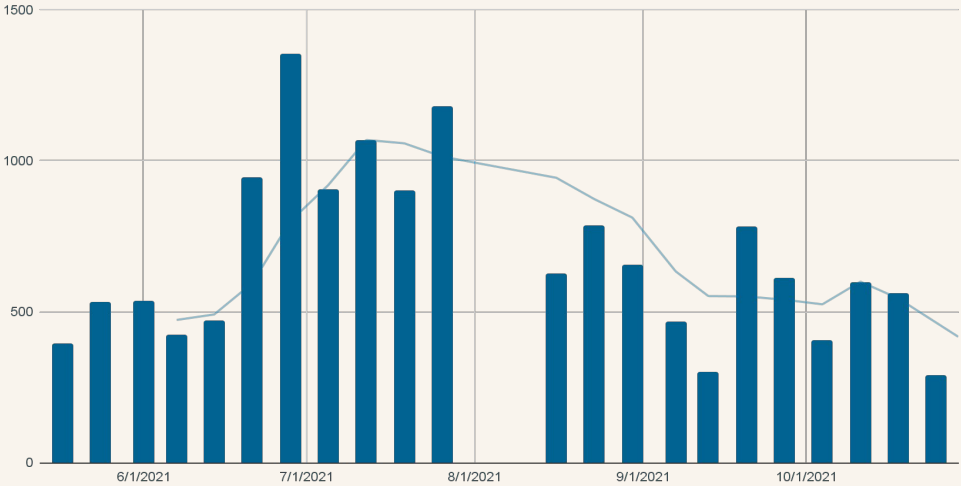
Create Defensible Space to Protect Against Wildfire



Reporting & Insights

2021 Activity Summary

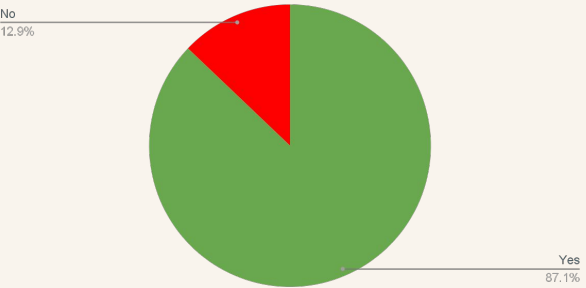
Volume by week



By starting earlier in the season we brought the participation spike much earlier in the fire season, increasing the impact to safety. Noting the Woodward fire drove the late peak in 2020

The free curb pickup program continues to overwhelmingly drive resident behavior.

Did the free chipping program cause you to remove the vegetation?

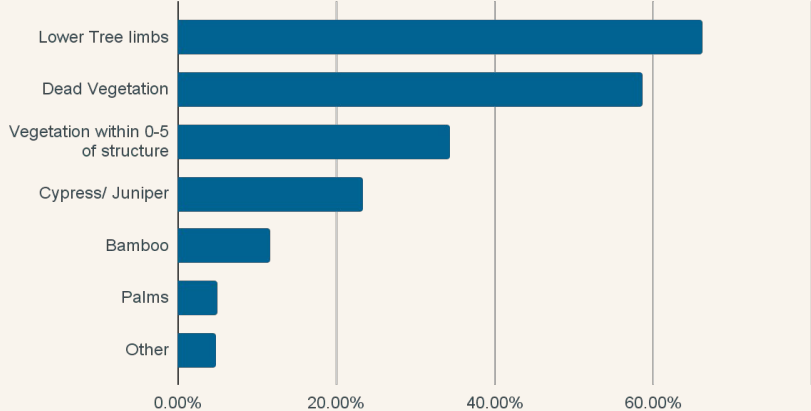


| | MWPA | FireWise Communities | Highest Risk* | Medium Risk* |
|-------------------|--------|----------------------|---------------|--------------|
| Cubic volume | 14,806 | 7,854 | 1,687 | 10,705 |
| Completed pickups | 3,793 | 2,552 | 368 | 2,830 |

*Risk is based on the CWPP risk score assigned to each address from the Marin CWPP Flame Model

The program is driving removal of the most hazardous material

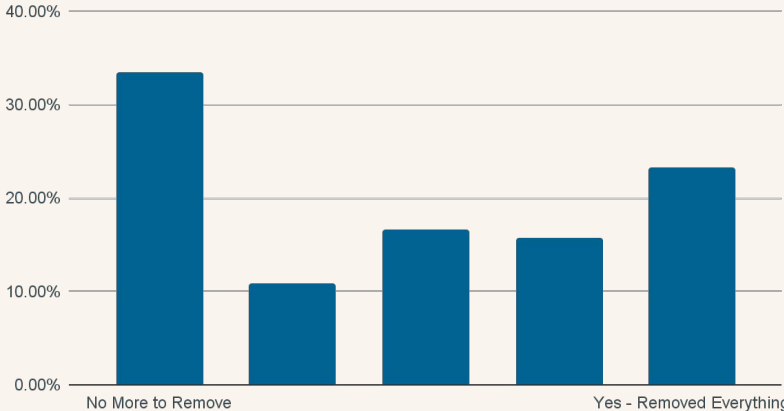
Vegetation removed due to chipping program



n=1739, residents can select multiple options

But 77% of residents report having more vegetation still to remove

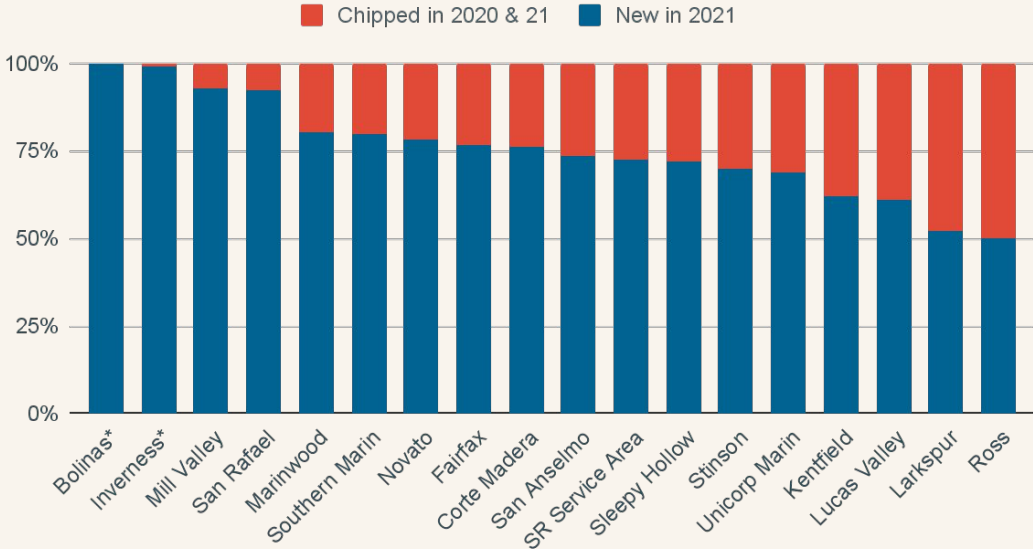
Did you remove all the vegetation you wanted to?



The 2021 program successfully expanded to more residents

80% of participants were new to curb chipping in 2021.

New to Program in 2021



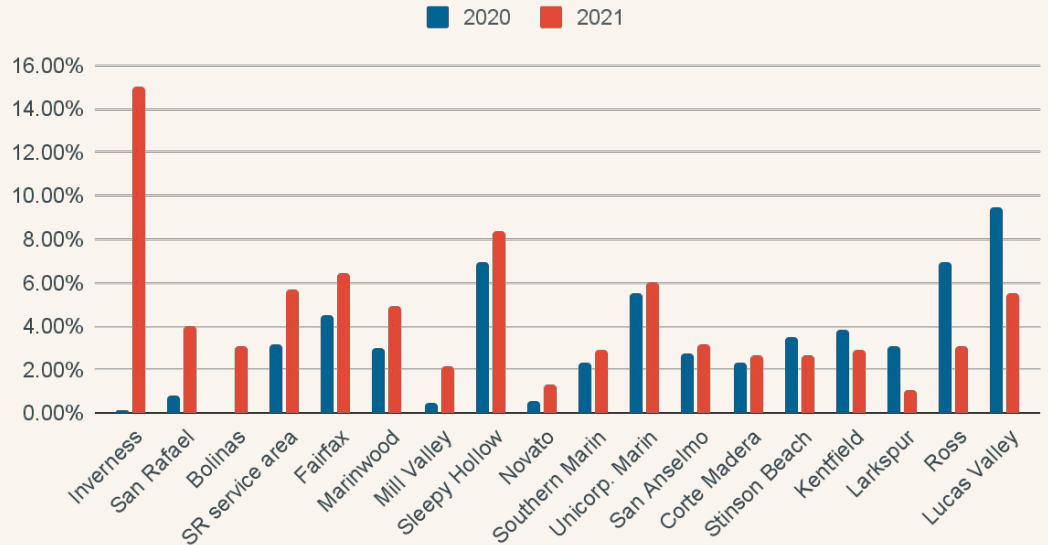
*Bolinas was not covered in 2020 and Inverness had a small event in 2020 as extension of Point Reyes

While growing participation across in most communities

Inverness had 1 out of 7 homeowners participate in 2021. 1 out of 3 in Inverness cited a neighbor as the source of how they learned about the event.

This reinforces the potential to support and leverage neighborhood leaders to get the word out locally including placing neighborhood signs in key places prior to the chipping event(s).

Participation (Unique pickup / Dwellings)

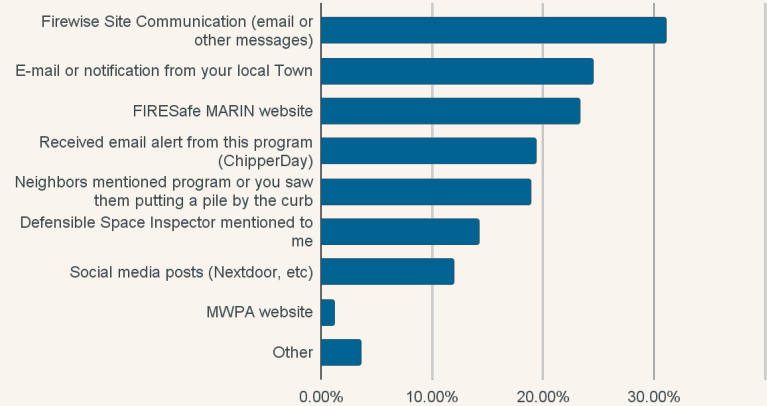


The program is driving removal of the most hazardous material

Email from firewise and town remains the top channel for comms but there is a big opportunity to leverage the DSI Evaluators to drive new chipping engagement

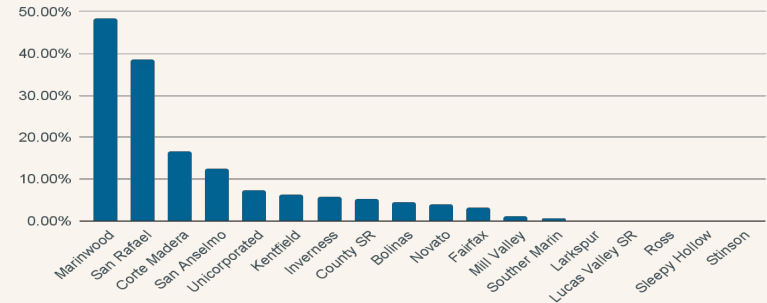
We estimate that if all DS Evaluators promoted the program at same levels as San Rafael we would have generated almost 400 additional registrations and over 1,500 cubic yards of volume.

How did you hear about the program?



n=1635. Respondents can check multiple sources.

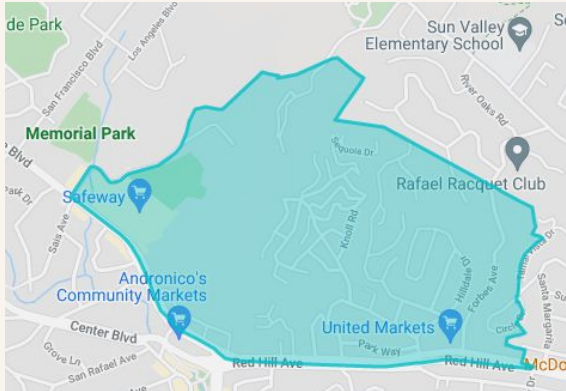
Residents reporting their defensible space evaluator mentioned chipping program



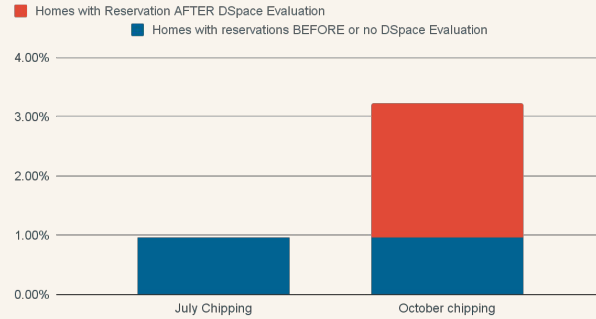
Understanding the impact of DSpace Evaluations & Chipping

Analysis of **Sequoia community**. Sequoia had 2 chipping events the week of July 19 and week of October 18. The community had DSpace evaluations the week of Sept 7th and 13th

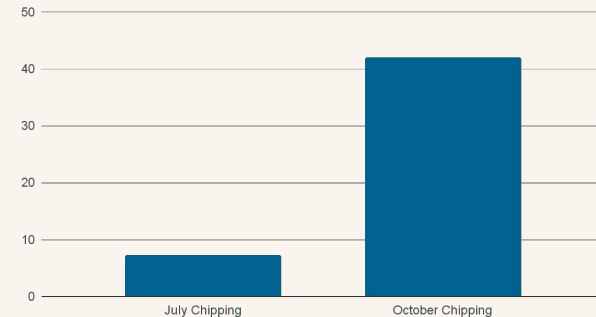
We see a significant lift in participation rate and volume driven by reservations after an evaluation



Participation Rate (as % of homes)



Cubic Yards chipped



Curbside program eliminates 90% of the miles associated with removal of this material

1 Chipper Truck = 17+ small landscaper pickup trucks

If each individual resident took their material to the nearest landfill this would translate to over 51,000 miles. The Chipper program was less than 5,000 miles for the entire season.

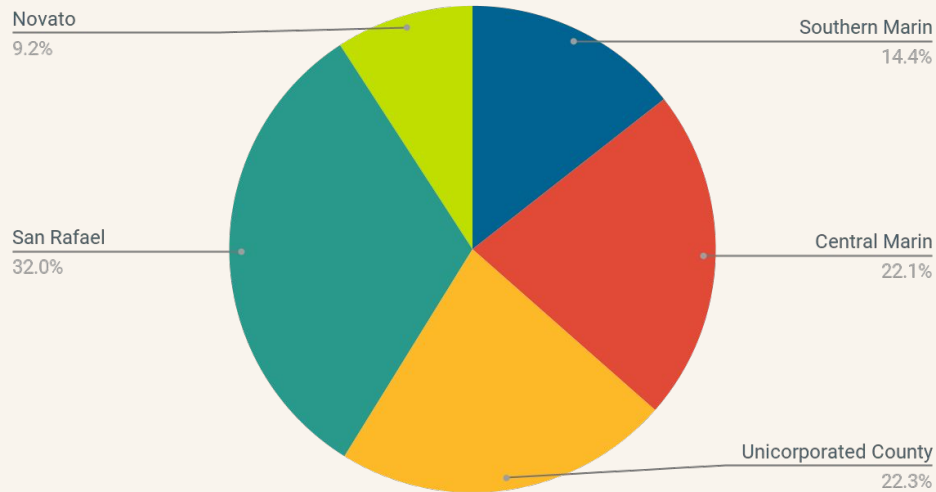
Eliminating over 18,500 kg of CO₂



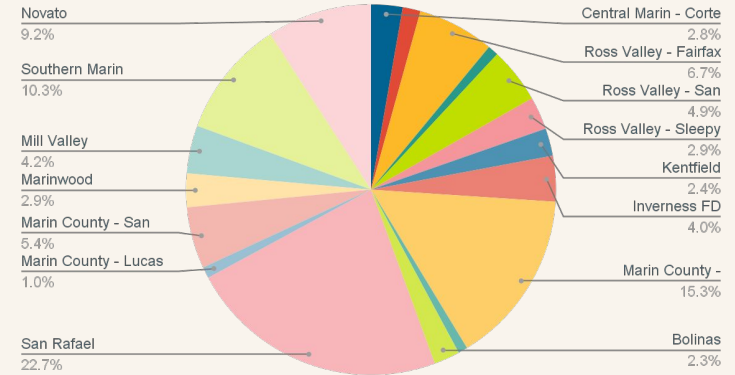
“We have a large wooded area on our property with redwood and bay trees. We continuously try to remove dead or fallen trees and Scotch Broom. We are very appreciative of the chipper program in helping to get rid of said trees and debris. In past years we’ve made numerous trips hauling the debris to the Nicasio dump site. The chipper program has saved us time, hauling, and money. The only improvement would be if it could be done twice a year. Thank you for this program.”

MWPA Zone Analysis

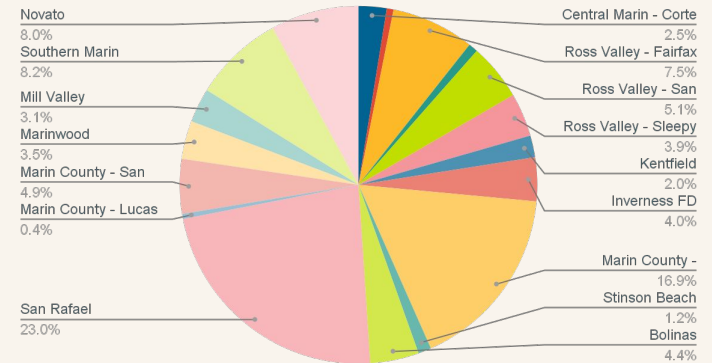
Pickups by MWPA Zone



Pickups by Agency



Volume by Agency



Public input and testimony

"We and all our neighbors are deeply appreciative of the service being provided by you and firesafeMarin"

- **San Rafael Resident**

"I went down to deal with the "excess" and found it was gone! How happy was I? Very, very happy!"

- **San Rafael Resident**

"Thanks again for putting this program together for our neighborhood - it was a huge help!"

- **Novato Resident**

"Huge help. Many thanks!"

- **Mill Valley Resident**

"They did a quick work of the job. Cleaned up beautifully."

- **San Rafael Resident**

"They worked so hard and so fast! I just want to commend them for going the extra mile at 5:30 pm after working all day! You have an amazing team!"

- **Mill Valley Resident**

Public input and testimony

continued...

"Thank you so much. The crew was fast and efficient. Hang on to them."

- **Novato Resident**

"No Questions, I just wanted to say Thank You for the great service this morning!"

- **San Rafael Resident**

"They were just here, right on schedule. Really appreciate this great service."

- **Corte Madera Resident**

"They went over and above in helping me move the very large log. In fact they walked to the back yard to gather the log. They get an A plus. Thanks so much."

- **Larkspur Resident**

Resident Feedback

Of the total pickups completed, 45% of all residents took the time to fill out the post chipping survey. The program has a 98.7% five star rating (up from 89% last year). The vast majority of comments left on the survey are positive. Some do offer constructive advice on how to improve the program in coming years.

Potential to provide and use Firewise leads to place neighborhood signs in key places prior to the chipping event(s)

“This is great! - One of the more important uses of tax dollars for me locally since paying for a chipper service is prohibitive and I have a large forest property.”

Top criticism/constructive comments

Increased pile sizes

“Wish I could have removed more than the 4' x 4' x 15' limit.”

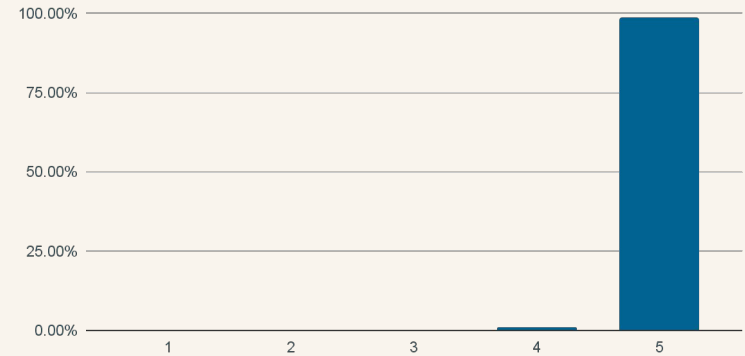
A desire for additional chipper days or a longer season

“I love this program. The only thing better would be more often.”

Wish they had found out about the program earlier

“Great program. It would have been easy to miss the program if the fire inspector and a neighbor hadn't informed me. Better outreach to neighborhoods would inform more people who would like to participate.”

How would you rate overall experience with the free curb chipping program from MWPA?



Understanding the Return on Investment

The curbside chipper program represented an excellent return on taxpayer dollars, delivering the desired results in an efficient and cost-effective manner.

Investment

Total program expenditures during the 2021 program totaled **\$889,946.50**. Operational Costs, including chipper contractors, dump fees, and software, totaled \$828,336.57. Administrative Costs totaled **\$61,008**. Miscellaneous costs, including marketing, printing, and technology expenses, totaled \$5,078.93. Reimbursements from Member Agencies totaled \$4,477.

Results

87% of participants stated that the curbside chipper program caused them to remove the harmful vegetation on their property.

84% of pickups were in medium risk to highest risk zones.

98.7% of participants rated the program as a 5 (highest rating)

Understanding the Return on Investment

Continued...

Value

The cost for a homeowner to properly remove vegetation from their property is dependent on a number of different factors and thus varies greatly from property to property. Most private contractors will charge a minimum of \$150 for any chipping and/or vegetation removal project. In addition to the financial cost, there is also the time and labor involved in removing the vegetation properly. As one homeowner noted:

*“...[the problem facing homeowners] is usually not the work of cutting all the low hanging branches and the gathering of the dead vegetation, **it's how to dispose of it all.** Your crew efficiently chipped everything and even cleaned the driveway before moving on to the next pile down the road.” - San Anselmo resident.*

Bottom line - The value of two free chipper days far exceeded the Measure C tax payment of almost all Marin County residents.

Conclusion

Program leaders prudently managed their allocated budget and kept overhead low—over \$0.90 of every dollar spent during the 2021 season went to the core mission: chipping and disposing of dangerous vegetation fuel. **Additionally, the cost per pickup in 2021 decreased by 11% compared to the 2020.**

Future updates

01

Further expansion

In the coming season, the program will continue to expand service coverage to ensure all residents within the Marin JPA are able to receive service through the Chipper Day program.

02

Zonehaven

In future seasons, the program hopes to incorporate the mapping data of Marin County provided by Zonehaven to create a more accurate pickup and address location system.

Looking Forward to 2022

The Chipper Day program has received overwhelmingly positive feedback and a 40% increase in pickups over the first year. In the next season, the chipper day program will be under the direct supervision of the MWPA and managed by MWPA staff.

The program looks to continue to provide the same high quality service expected while also looking for ways to increase service and visibility. A proposal for the continuation of the chipper day program will be submitted to the MWPA Operations Committee.



Recommendations for the 2022 Chipping Season

Fire Safe Marin recommends the following goals for the 2022 Chipper Program season.

Continue program as participation is expanding and program drives resident investments in fire safe behavior

Link closer with DSI inspections, leverage the field teams for awareness of problem(s) and 'free' solution

Create and distribute season schedule early to allow DSI programs to build inspection schedule around planned pickups.

Revise reminders to reduce 'no piles' - goal to drive from 20% to 10%

Use demand forecasting to try and reduce crew costs by 10% using mix of fixed days and on-demand structure

Thank You

Visit us at <http://firesafemarin.org>
or contact us at info@firesafemarin.org for more information.



Adapting to Wildfire



**FIRE
SAFE
MARIN**

In partnership and support with:

Bolinas Fire District

City of Larkspur

City of Mill Valley

City of San Rafael

County of Marin

Inverness Public Utility District

Kentfield Fire Protection District

Marinwood Community Services District

Muir Beach Community Services District

Novato Fire Protection District

Sleepy Hollow Fire Protection District

Southern Marin Fire Protection District

Stinson Beach Fire Protection District

Town of Corte Madera

Town of Fairfax

Town of Ross

Town of San Anselmo

Our Partners

CAL FIRE • California Fire Safe Council • **Ecologically Sound Practices** • Firewise USA • **Marin Association of Realtors** • Marin Center for Independent Living • **Marin County Fire Chiefs Association** • Marin County Office of Education • **Marin County Office of Emergency Services** • Marin County Parks and Open Space • **Marin Municipal Water District** • Marin VOAD – Voluntary Organizations Active in Disaster • **Marin Wildfire Prevention Authority** • Neighborhood Response Groups • **Northern California Landscape Contractors Association** • Sonoma Fire Safe Council • **UC Marin Master Gardeners**

