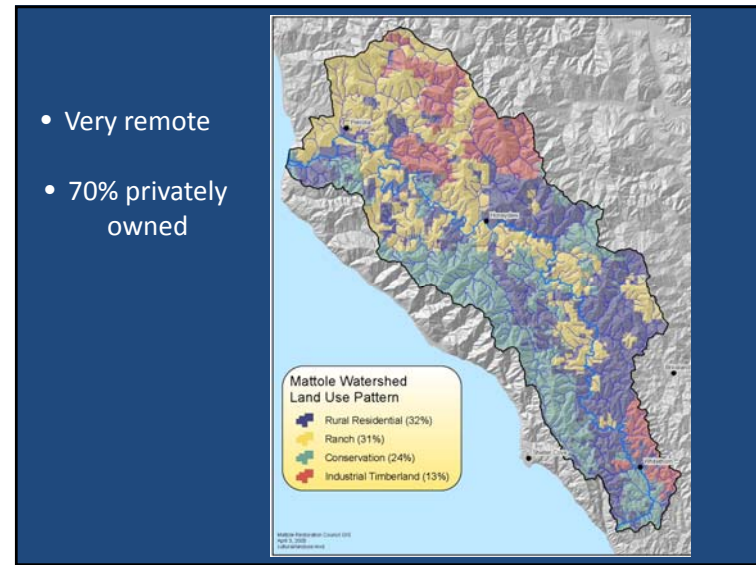
















## Outline

- Introduction to the Mattole Watershed
- Invasive Species Program
  - Education
  - Outreach
  - Community Involvement
- Fee For Service
- Contracts
- Case Study: Japanese Knotweed





### Mattole Watershed Species Of Interest

			
Japanese knotweed	Scotch broom	French broom	Cape ivy
			
English ivy	Tansy ragwort	Malta star-thistle	Gopher weed
			
Oblong spurge	Cotoneaster	European beachgrass	Yellow flag iris

### Education



- High school students
- Summer employment
- Hands-on experience

### Nick's Interns



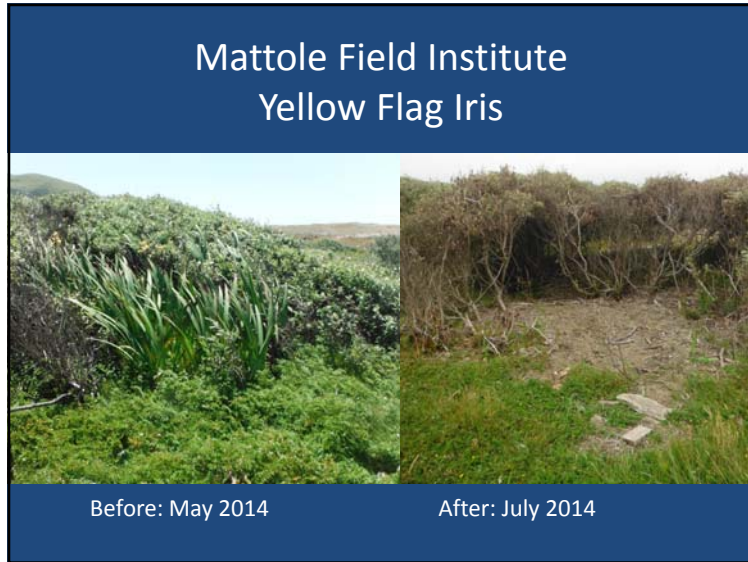
### Nick's Interns Tansy Ragwort

- Pre-treatment: July 2014
- Post-treatment: July 2014

	
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### Mattole Field Institute







Fliers posted throughout Mattole watershed



### Mattole Restoration Council's Invasive Plant Community Cost-Share Program

By Cindy Peterson

Is that pesky patch of Scotch broom staring you down every morning as you sip your coffee? Are those Tansy ragwort plants waving in the wind taunting and teasing you in the summer breeze? Whether or not you have been meaning to deal with those invasive plant infestations on your property, now is a great time to take action! The MRC is introducing its new Invasive Plant Community Cost-Share Program.

**WHY IS THIS PROGRAM IMPORTANT?**

We have all seen what invasive plants can do to the natural landscape in this watershed, especially if not removed. For instance, in the spring when the Scotch broom is in full bloom, it is choking to smother much of the pastures and meadows we have enjoyed as a thick blanket of bright yellow, leaving the natural ecosystem completely altered and the land largely useless. Each year, Tansy ragwort seems to be spreading throughout the watershed as well. Due to its toxicity, Tansy ragwort poses a serious threat to livestock and seriously degrades the value of the landscape. These are just a few examples of invasive species that exist in the Mattole. The goal of this program is to reward the reach of our effort to control invasive plant infestations in our watershed through collaboration with landowners. The Invasive Plant Community Cost-Share Program allows us to control invasive plants on your property and share the cost of the program with you. The program is designed to be a win-win for both parties. We will provide you with the resources to deal with the plants, and you will receive a 50% discount on the cost of the program. We will also provide you with the resources to deal with the plants, and you will receive a 50% discount on the cost of the program. We will also provide you with the resources to deal with the plants, and you will receive a 50% discount on the cost of the program.

**HOW IT WORKS:**

The MRC will provide these resources to landowners who are interested in removing invasive plant infestations on their property. The amount of funds allocated to each landowner for our share will depend on the priority level of their property. The Invasive Plant Program Coordinator will visit and assess the project site based on Table 1 below. The percentage category that most closely defines the project site will be the assessment of the project. Each MRC will come within the landowner will be responsible for the remaining 50%.

**Table 1: Assessment Criteria**

% Cost Covered by MRC	25%	50%	75%
Invasive Species Category	Red Alert/High	Medium	Controlled
Site Information	New Infestation	Medium	Well Established
Infestation Value	High/Critical	Medium	Low
Park Design	High	Medium	Low
Proximity to Water-Head	High	Medium	Low
Proximity to Water-Head	High	Medium	Low

**Table 2: Categorized Species List**

Red Alert/High	Medium	Controlled
Scotch broom	Scotch broom	Scotch broom
Tansy ragwort	Tansy ragwort	Tansy ragwort
Blackberry	Blackberry	Blackberry
English ivy	English ivy	English ivy
Scotch broom	Scotch broom	Scotch broom
Scotch broom	Scotch broom	Scotch broom
Scotch broom	Scotch broom	Scotch broom

**HOW TO PARTICIPATE IN THE COST-SHARE PROGRAM:**

1. Identify the area you wish to have removed and contact the MRC at 530-938-2010.
2. Arrange a pre-project inspection. MRC staff will map and assess your project site, including the percentage that the MRC will pay as well as the total project cost.
3. Review the map and project plan. Sign work agreement with MRC.
4. Complete the project.
5. Contact your project manager and arrange your final bill payment.

## Early Detection Rapid Response

- 300 square miles
- Community reliance
- Webpage and paper

### "I SAW IT!"

#### Invasive Plant Sightings in the Mattole Watershed

Drop off at the Mattole Restoration Council Office in Petrolia (upstairs at the Mattole Valley Community Center) or mail to: PO Box 160/Petrolia, CA 95558 THANK YOU!

Your name and contact information:

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Plant name (s): (NOTE: It is helpful to include photographs if possible)

---

Date you SAW IT:

---

Location of Sighting (Detailed description and/or rough map is helpful):

---

Habitat: (Ex: Roadsides, Forest, Rangelands, Public Recreation Area, Riparia, etc.)

---

Size of Infestation: (Check the box that best describes the infestation)

Small infestation (1-10 plants)       Large infestation (50-100 plants)

Medium infestation (10-50 plants)       Too many to count

Name and Address of Landowner (s) if known:

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Notes:

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The information you provided is for MRC use only and will not be shared with anyone else. Your observation will be added to our database and will greatly help our efforts in managing Invasive Plants in the Mattole watershed. Thank you very much for participating!



Volunteer Days





## Invasive Plant Removal

Do you have a pesky patch of invasive plants that you want to get rid of? Our services provide reliable crews trained in invasive plant removal at an affordable cost.

- \* Fast
- \* Efficient
- \* Experienced



For a Free Consultation, Contact  
Unity at the Mattole Restoration  
Council • 629-3514 or [unity@mattole.org](mailto:unity@mattole.org) \*





## BLM-MRC King Range National Conservation Area





**Over 12 years, currently manage 30 sites**



## Japanese Knotweed (*Fallopia japonica*) Path towards eradication



## What is *Fallopia japonica*?

- Herbaceous perennial in the Polygonaceae family (buckwheat)
- Listed in top 100 worst invasive species (WCU)
- Native to Japan's volcanic fumaroles
  - Evolved to be inundated with ash and poisonous gases for years at a time
  - 0.7g (size of fingernail) can spawn new infestation
  - Rhizomes can survive  $-31^{\circ}\text{F}$ , extend 23 ft horizontally and 10 ft deep

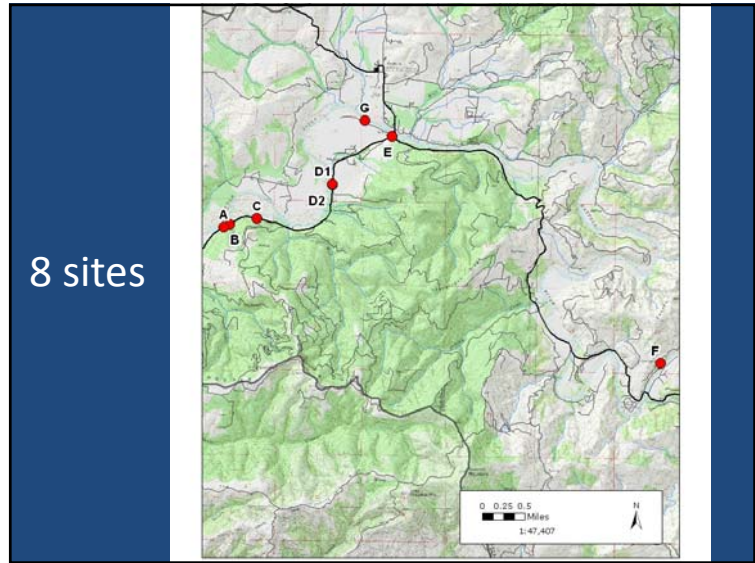
## What is *Fallopia japonica*?

- Australia, it is **illegal** to have any of this species growing on one's property
- UK: Wildlife and Countryside Act 1981 Schedule 9, Section 14 of the Act "It is an **offence** to plant or otherwise cause the species to grow in the wild."
- Banks reluctant to loan to infested properties
- 2012: the policy at the Woolwich was "FAJA is found on or near the property then a **case** will be **declined** due to the invasive nature of the plant."

Featured in Harper's Magazine 2015 – "Letters from Whales"







## Initial Treatment 2007

Totals 2007	# Injected	# Sponged	# Cut stemmed	#Stems
A	13	188	33	234
B	28	278	116	422
C	50	171	94	315
D	37	81	0	118
D2	12	450	0	462
E	10	289	41	340
F	71	70	30	171
	221	1527	314	2062
	22.5 oz @ 100% solution	16 oz @ 8% solution	4 oz @ 50% solution	42.5 oz = 1.33 quarts
	LI-700= 2 oz at 1%			1,736 quarts = max

2008 Expected Herbicide Use on Japanese Knotweed				
Totals	# To Inject	# Potential Sponge	# Cut stemmed	#Stems
A	0	4	0	4
B	0	15	0	15
C	0	8	0	8
D	35	20	0	55
D2	0	120	0	120
E	0	0	0	0
F	15	10	0	25
				0
	.158 quarts	approx .64		1,736 quarts = max

## Aquamaster



**SUPPLEMENTAL LABELING**

READ THE ENTIRE LABEL FOR AQUAMASTER HERBICIDE BEFORE PROCEEDING WITH THE USE. DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Aquamaster Herbicide as permitted according to the supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label located provided with the pesticide container and on the supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

**AQUAMASTER®**  
Herbicide by Monsanto

For Foliar and Broadcast Treatment of Japanese Knotweed & Oriental Bittersweet

EPA Reg. No. 528-343

Aquamaster is a registered trademark of Monsanto Technology LLC.

Keep out of reach of children.

**CAUTION!**

To user of an emergency hotline for pesticide call 800-424-9293 or email: 1-800-424-9293

**DIRECTIONS FOR USE**

This is a solution of Foliar use to use the product in any manner mentioned with its labeling.

This label must be in the possession of the user at the time of the herbicide application.

**CAUTION: AVOID CONTACT OF HERBICIDE WITH SKIN, CLOTHING, EXPOSED NON-ROOBY BODIES OR GROUP OF CLOTHES, SHOES, SHOES, PANTS AND TWEED, BECAUSE THESE CONTACTS ON DESTRUCTION MAY RESULT.**

See the "GENERAL APPLICATION," "MIXING AND APPLICATION INSTRUCTIONS," AND "ADJUTIVE AND OTHER INFORMATION" SECTIONS of the label located for complete and detailed information. See the "WEEDS CONTROLLED" section of the label located for specific herbicide for various stages of treatment of weeds to be treated.

**ORIENTAL BITTERSWEET**

For control of Oriental Bittersweet (Poncirus trifoliata), this product may be applied as a 2.5% or 5% concentration containing 0.1% to 0.2% of a contact herbicide containing at least 20 percent active ingredient. Screen through coverage when using contact herbicides using hand-held equipment.

For broadcast application, apply 7.5 quarts of this product with an aerial applicator or backpack sprayer, using 1.5% to 2.5% active ingredient and 0.2% to 0.3% of contact herbicide.

Allow at least 2 days after application before disturbing treated vegetation. This product does not control plants which are naturally submergent or have a majority of root foliage under water.

**WHEN USED IN COMBINATION AS RECOMMENDED BY MONSANTO COMPANY, THE SAFETY OF HUMANS AND OF ANIMALS EXPOSED TO ANY SPRAY, FOG OR DUST IS NOT THREATENED BY THE APPLICATION OF AQUAMASTER HERBICIDE.**

**READ THE "USE OF IMMUNITY AND LIABILITY" IN THE LABEL LOCATED FOR AQUAMASTER HERBICIDE BEFORE USING, AT SUPPLEMENTAL LABELING AND IF THERE ARE ANY OTHER INFORMATION, CHECK THE PRODUCT INFORMATION AT MONSANTO COMPANY.**

MONSANTO COMPANY  
800 N. LITCHFIELD BLVD  
ST. LOUIS, MISSOURI 63167 U.S.A.  
©2008



## 2009 Treatment

Treatment							
Date	24-Sep	Data	MS				
Location	Lighthouse Rd/Mansions	Photo					
Crew							
GPS PT	PHOTO PTS.	HRS.	# Injected	# Sponged	# Cut stemmed	Ant. Herbicide Used	
A POCU_GOUA1	B/A	0.25	0	2	0	0.01	
B POCU_GOUA2		0.25	0	28	0	0.1	
C POCU_GORR		0.25	0	2	0	0.01	
D2 POCU_SCHP2		1	0	260	0	0.5	
E POCU_CHAM		0.25	0	6	0	0.03	
F G POCU_CHAM2	POCU_CHAM_001002003	0.25	15	9	0	1.3	
Total Herbicide Used	2.87	# of Acres Treated	606	337			

### Tarp it up!



### 2010 Treatment

Treatment	Date	Location	Crew	PHOTO	minutes	# Injected	# Sponged	# Cut stems	sq. feet	Amt. Herbicide Used
	21-Sep-2010	lighthouse rd	LB	Photo						
GPS PT	BIA:									
A					25	0	10	0	150	
B					30	0	43	0	600	
C					20	0	11	0	480	
D										
D2									500	
E					30	0	53	0	400	
F possibly gone										
G					30	0	12	0	48	
Treatment	24-Sep									
Date	lighthouse rd			Photo						
Location	LB, NT									
Crew										
GPS PT	BIA:									
A										
B										
C										
D										
D2					120	0	586	0	500	
E										
F										
G										

herbicide mix= 8oz.  
4oz. Water  
4oz. Aquamaster  
.04oz. Surfactant

total sq. feet= 6808  
total acres= 0.15629

### 2011 Treatment

Treatment	Date	Location	Crew	PHOTO	minutes	# Injected	# Sponged	# Cut stems	sq. feet	Amt. Herbicide Used
	11-Oct-2011	lighthouse rd	LB, LP, Peter	Photo						
GPS PT	BIA:									
A					5	0	6	0	150	
B					10	0	7	0	300	
C					23	0	63	0	400	
D					13	0	30	0	500	
D2					65	0	212	0	500	
E					10	0	7	0	400	
F possibly eradicated										
G possibly eradicated										
Treatment										
Date				Photo						
Location										
Crew										
GPS PT	BIA:									
A										
B										
C										
D										
D2										
E										
F										
G										

herbicide mix= 16oz.  
8oz. Water  
8oz. Aquamaster  
actually only used= 7 oz. total mix (3.5oz of Aquamaster)

total sq. feet= 6808  
total acres= 0.15629

## 2012 Treatment

Treatment									
Date	9-Oct-12		Data	Unity					
Location	Lighthouse rd		Photo						
Creaw	Unity, Rachel, Tyler								
GPS PT	PHOTO PTS	minutes	# Injected	# Spunged	# Cut stemmed	# Stems Pulled	sq. feet	sq. feet	Amt. Herbicide Used
A.	5	0	0	0	0	30	180	0	
B.	10	0	0	0	0	12	600	0	
C.	23	0	0	0	0	15	4500	0	
D.	13	0	0	0	0	7	500	0	
D2	85	0	0	0	0	47	200	0	
E.	12	0	7	0	0	40	400	0	
F possibly eradicated									
G.	0	0	0	0	0	3	48	0	
Treatment									
Date			Data						
Location			Photo						
Creaw									
total stems		204							
							total sq. feet= 6808		
								total acres= 0.15629	



2005

## Japanese Knotweed Site along Lower Mattole



2005

2013

## Larger Tarps!





Maintaining Tarps

## 2013 Treatment

Treatment	Date	Data	Unit					
Date	8/13/2013							
Location	Lighthouse Rd	Photo	yes					
Crew	LUM AM							
GPS PT	PHOTO PTS	minutes	# Injected	# Sponged	# Cut	# Stems Pulled	Sq. feet	Amt. Herbicide Used
A (142)		20		2			100	0.4
B (143)		30		2		2	900	0.4
C (144)	1504-1507	45		14			4000	1.2
D (145)	1504-1509	30		15			500	1.3
E (146)	1504-1500	15		4			500	0.5
F (148)		30		9		7	400	0.8
F possibly eradicated								
G (147)	1502-1508	20		3			40	0.4
NOTE: Monitor next week and get photos of each site. Document mortality and condition of plants.								
Units					Data			
Total Herbicide mix					total stems=	58	total sq. feet=	6808
Water							total acres=	0.15629
Aquamaster								
Remaining								
Used								
50% dilution				Total Herbicide used =	2.5 oz			

## 2014 Treatment

Treatment	Date	Data	Unit					
Date	10/13/2014							
Location	Lighthouse Rd/Mattole Camp	Photo	Yes					
Crew	Unity Milton							
GPS PT	PHOTO PTS	HR.	# Injected	# Sponged	# Cut	Amt. Herbicide Used		
N/A								
A	Knotted_10_13_2014	20 min	5			>1oz		
B	none	20 min	0			0		
C	Knotted_10_13_2014	0 min	0			0		
D	Knotted_10_13_2014	1 hour	20			>1oz		
E	none	20 min	3			>1oz		
F	Knotted_10_13_2014	15 min	11			>1oz		
G	Knotted_10_13_2014	30 min	6			>1oz		
H	Knotted_10_13_2014	30 min	0			0		
Total Herbicide Mix				22 oz	total stems	40	total sq. feet=	6808
Water				29 oz			total acres=	0.15629
Polaris (Amazapp)				2 oz				
Remaining				16 oz				
Used				6 oz				
50% dilution				Total Herbicide used = (approx) 0.5 oz				

## 2016 Mattole Watershed Knotweed Eradication Project

**Have you seen these invasive plants?**

Redwood Community Action Agency is pleased to announce that the WINDY Commission Board has funded a project to support the complete eradication of Invasive, non-native knotweeds in Humboldt and Del Norte Counties. While most infestations have been found, we are looking for your help to identify more!

**Please report knotweed sightings to:**  
 Redwood Community Action Agency  
 Natural Resources Services Division  
 amy@rcaaa.org or (707) 269-2055

Please include appropriate details on location and land owner identification if available.

## Collaboration with RCAA

- 5 year contract
- Treatment and monitoring of all known sites
  - The switch from Glyphosate to Imazapyr
- Surveys of lower 5 miles of Mattole River
- Education and outreach to landowners



## Imazapyr



## (Year 11) 2016 Treatment 1% solution Imazapyr

- Site A: No canes present
- Site B: No canes present
- Site C: 22 bunches treated
- Site D1: 4 canes treated
- Site D2: 3 canes treated
- Site E: 6 canes treated
- Site F: 1 Cane treated
- Site G: No canes present



1000ml of solution used to treat all sites

FAJA Stems Present over 10 Years

