



Weed Management for Restoration



Weed Management Start With a Plan!

Integrated Weed Management Plan Checklist –
Your weed plan should be part of your overall
property restoration and
management plan



What is Integrated Weed Management Planning?



Template A

Date _____

Location___(be specific for your sites ie vegetable garden, driveway, ornamental shrub beds, fill out a template for each site and/or each weed species)_____

Weed species ___(list all the species you want to control)_____

Approximate size of area of concern__(for each site)_____

Management Goals___(eg. weed free vegetable garden, healthy turf for play area, maintain integrity of driveway by controlling all weeds)_____

Photos and or sketches (include these to compare before and after)

Summary of Weed Species Data Template B

Scientific Name	Common Name	Priority (*H,M,L)	Life cycle details	Effective Control Methods

* High, Medium, Low

Kochia



5366633



5392241

Kochia - Characteristics

- Annual plant, long taproot, hairy leaves, plant up to 6 ft
- Tolerates dry infertile soils, saline/ alkaline
- Prolific seed producer (14,000 seeds/plant)
- 75% seed viability, seed longevity in soil 1-2 years
- Reproduction by seeds only, stems can resprout to produce seed after mowing
- Germination very early in spring (from 36 to 100 degrees F) and throughout summer
- Dispersal of seeds by tumbling

Kochia- Control Strategies

- Kill plants when young to prevent seed production
- Mechanical control including tilling, pulling young plants and repeated mowing can reduce seed production and tumbling
- No biological control available
- Herbicide application successful in early spring before flowering, on plants up to 1 foot tall, must use surfactant. Some herbicide resistant strains
- Plant competitive plants with irrigation, or natives on dry sites

Integrated Weed Management Plan Template C

Weed species for control? (list information on name of weed, life cycle ie. annual, perennial, or biennial and noxious or nuisance weed)

Period of time for weed species control? (refer to information on timing of germination, flowering and seed set to determine optimum timing for control)

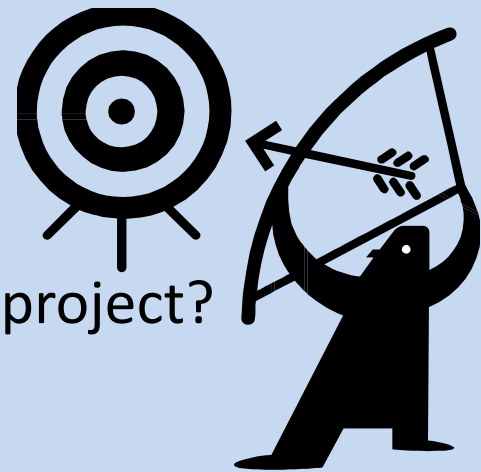
Method of controls to be used? (mechanical, cultural, chemical etc., be specific here eg. digging large plants (mechanical) and spraying remaining seedlings with glyphosate (chemical), then applying compost and reseedling in irrigated area (cultural).)

How do you plan to monitor weed species? (describe how you will keep track of how your control is working, eg. take photos, count rosettes, keep notes on weed cover high/medium/low compared to before treatment)

How will you know weed plan is effective? (compare monitoring information over the season to pretreatment, assess how close you are to meeting specifics of your management goal)

Integrated Weed Management Plan Checklist

- Define weed management goals that are compatible with restoration goals
 - Short term goal (1-3 years)
 - Long term goal (4-6 years)
 - When will you begin your restoration project?



Integrated Weed Management Plan Checklist

Describe property to be managed

- Location
- Size (full property and restoration area)
- Slope
- Aspect



Integrated Weed Management Plan Checklist

Site information

- Soil type
- Irrigation type
- Ornamental plants associated with weeds
- Native plants or animals associated with land
- Water systems (lake, river, stream) on land or adjacent to land



Integrated Weed Management Plan Checklist

Weed Identification

- Weed species (scientific name)
- Area of weed infestation or number of weeds
- Method of weed introduction
- Risk ranking – control priority (Noxious, highly invasive, allelopathy, etc.)
- Look at weeds in and around your restoration area, seed recruitment



Integrated Weed Management Plan Checklist

Weed Management Priorities

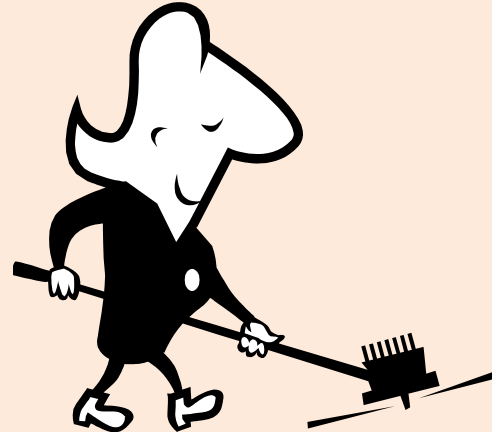
- Prevention of potential invaders
- Intensive management/eradication (high priority)
- Management of established stands (lower priority)



Integrated Weed Management Plan Checklist

IPM (IWM) Strategies – which of these are compatible with your restoration needs:

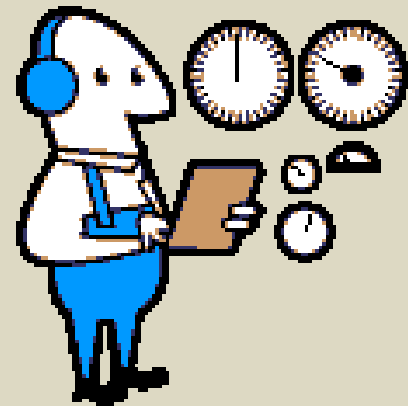
- Prevention
- Mechanical/Physical
- Biological
- Chemical
- Cultural
- Revegetation



Integrated Weed Management Plan Checklist

Monitor and Evaluate Efficacy

- Weed population size
- Evaluation and efficacy, is your strategy working
- Adjust management strategies, if needed





Questions so far?



Integrated Weed Management

- Control Weeds By Stand-Alone Or Combination Of These Methods:
 - Prevention
 - Mechanical
 - Biological
 - Chemical
 - Cultural

*“Control” means
to prevent all
seed production*

Weed Troubles

“You’ve got your troubles, I’ve got mine”

Nuisance Weeds

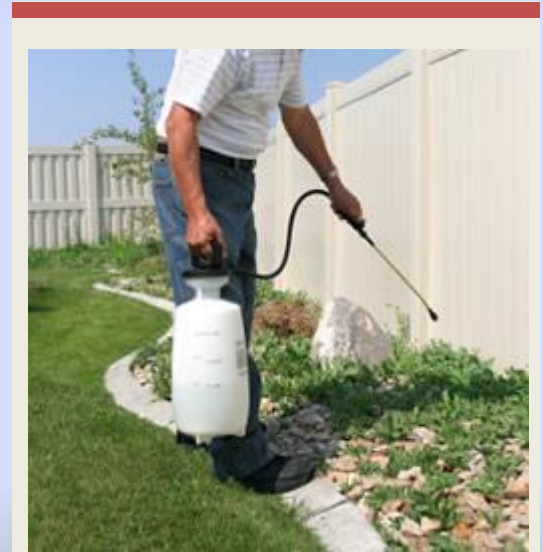
- Tumble mustard (*Sisymbrium altissimum*)
- Prickly lettuce (*Lactuca serriola*)
- Horseweed (*Conyza canadensis*)
- Salsify (*Tragopogon dubius*)
- Mallow, buttonweed (*Malva neglecta*)

Noxious Weeds

- Whitetop (*Cardaria draba*)
- Diffuse knapweed (*Centaurea diffusa*)
- Russian Knapweed (*Acroptilon repens*)
- Puncturevine (*Tribulus terrestris*)
- Kochia (*Kochia scoparia*)

Chemical Control

- ⊗ Read And Follow Manufacturer Label And Instructions
- ⊗ State Licensed Applicator
- ⊗ Selective Or Kills Variety
- ⊗ Greatest Liability



Biological Control

- ☀ Affective Only On Selective Plants
- ☀ Insects May Be Difficult To Find
- ☀ Requires 3-4 Years
- ☀ Very Safe



Biological Control

Mecinus janthinus, Swakane Canyon

5/28/2012



Before – Dalmatian toadflax

After

6/9/2016



Before - 2004



30 1:40 PM

After - 2008



8 4:31 PM

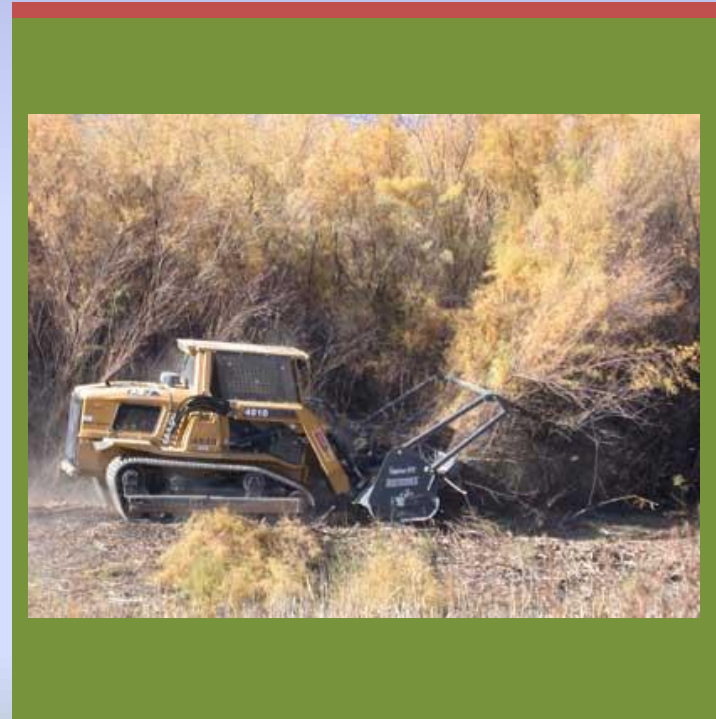
Mechanical Control

☀ Incomplete Method By
Itself

☀ Hand-Pulling

☀ Tillage

☀ Mowing



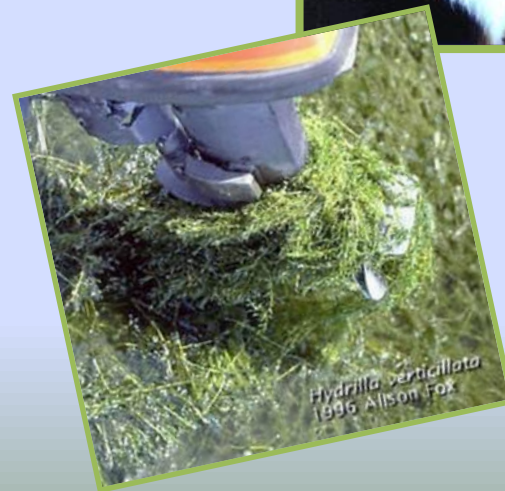
Cultural Control

- Better production on targeted crop
- Helps compete against weeds
- Timing of fertilizer application
- Rotating crops



Preventative Control

- Eliminate Before Establishment
- Precautionary Measures:
 - Underside Car
 - Under Boat Trailer and Boat
 - Shoes & Pant Cuffs
 - Pets
- Learn To Identify



Prevent Bigger Problems



Weed Management Plan


Also known as “No Idle Hands”



Overview of neighborhood



Look at this property



Restoration project area

Here are the property boundaries

Lets take a closer look at what's here



Are there any weed issue red flags??

7000 Glana Canyon Rd

Google



Do we need a plan???

Red Flags all over the place!!!



The natural restoration corner

Google



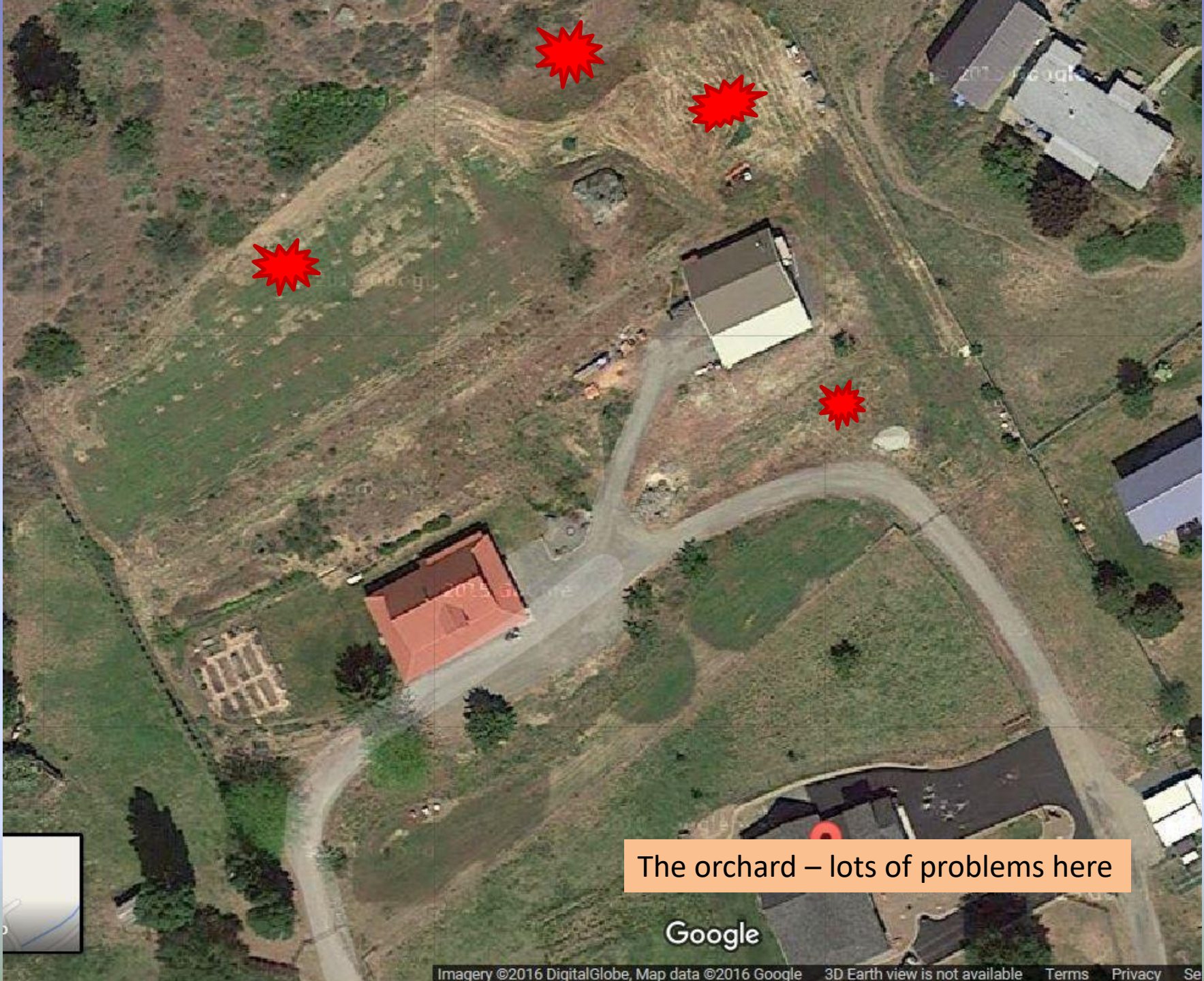
The steep mowed slope and junk piles

Google



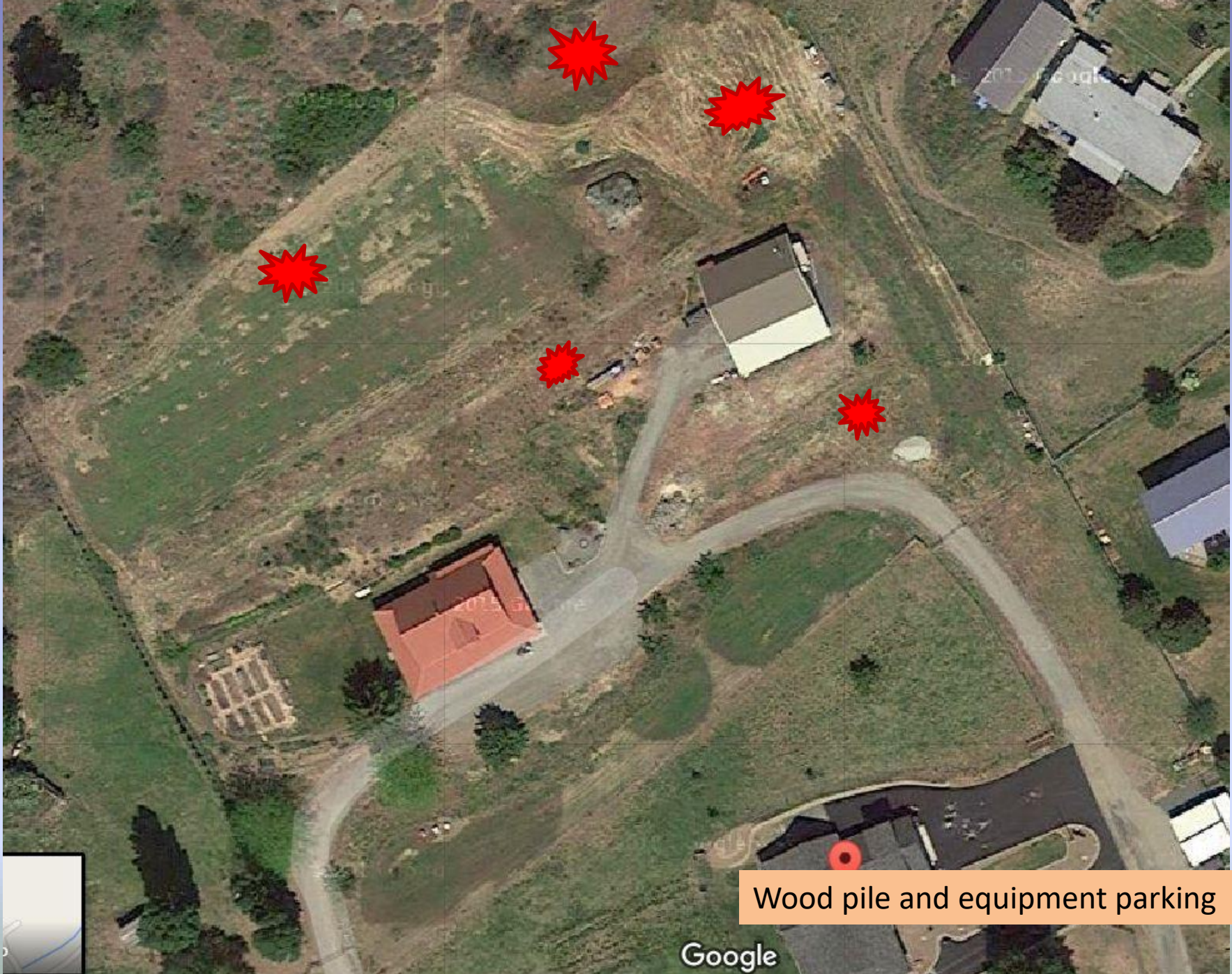
Stone and gravel piles

Google



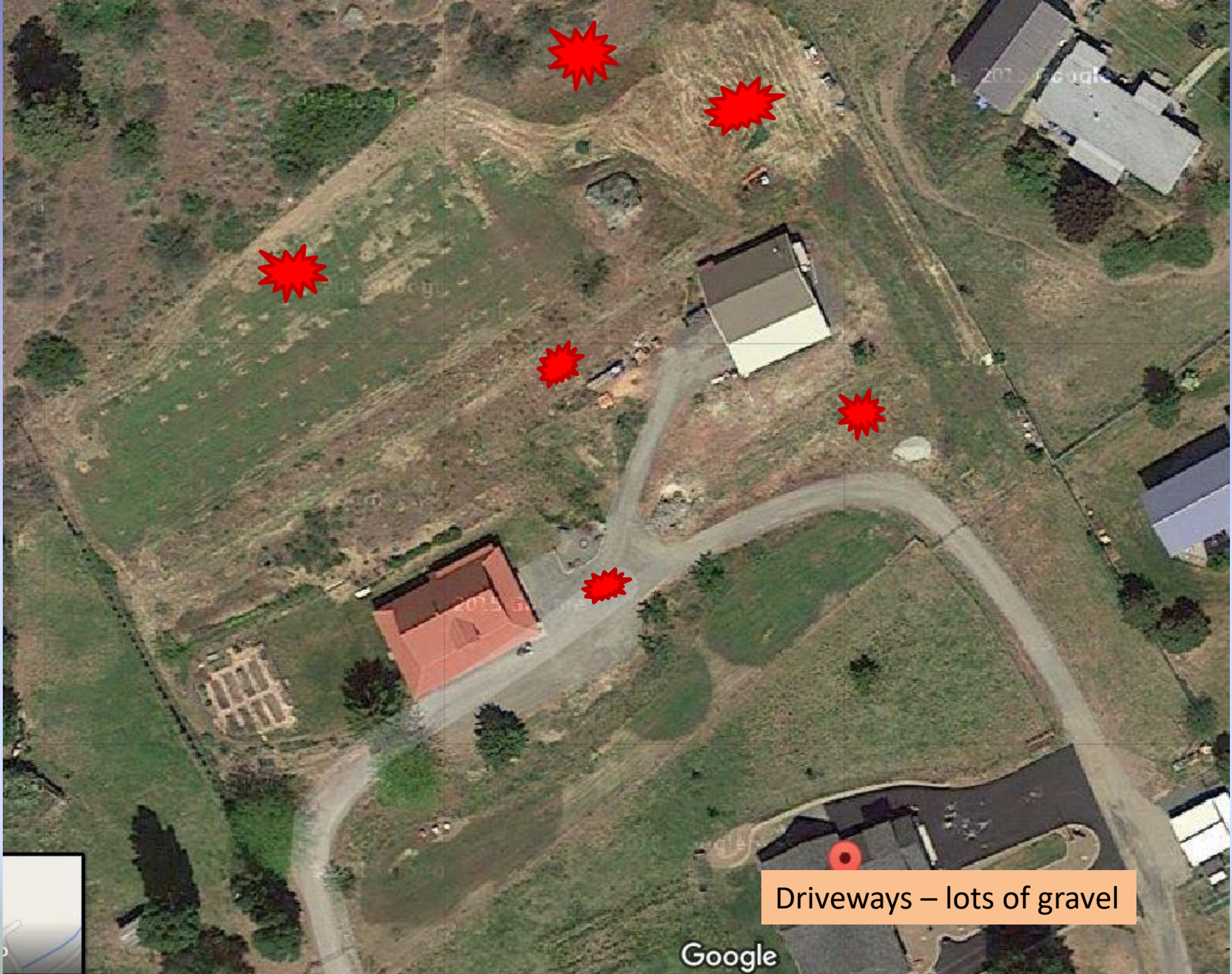
The orchard – lots of problems here

Google



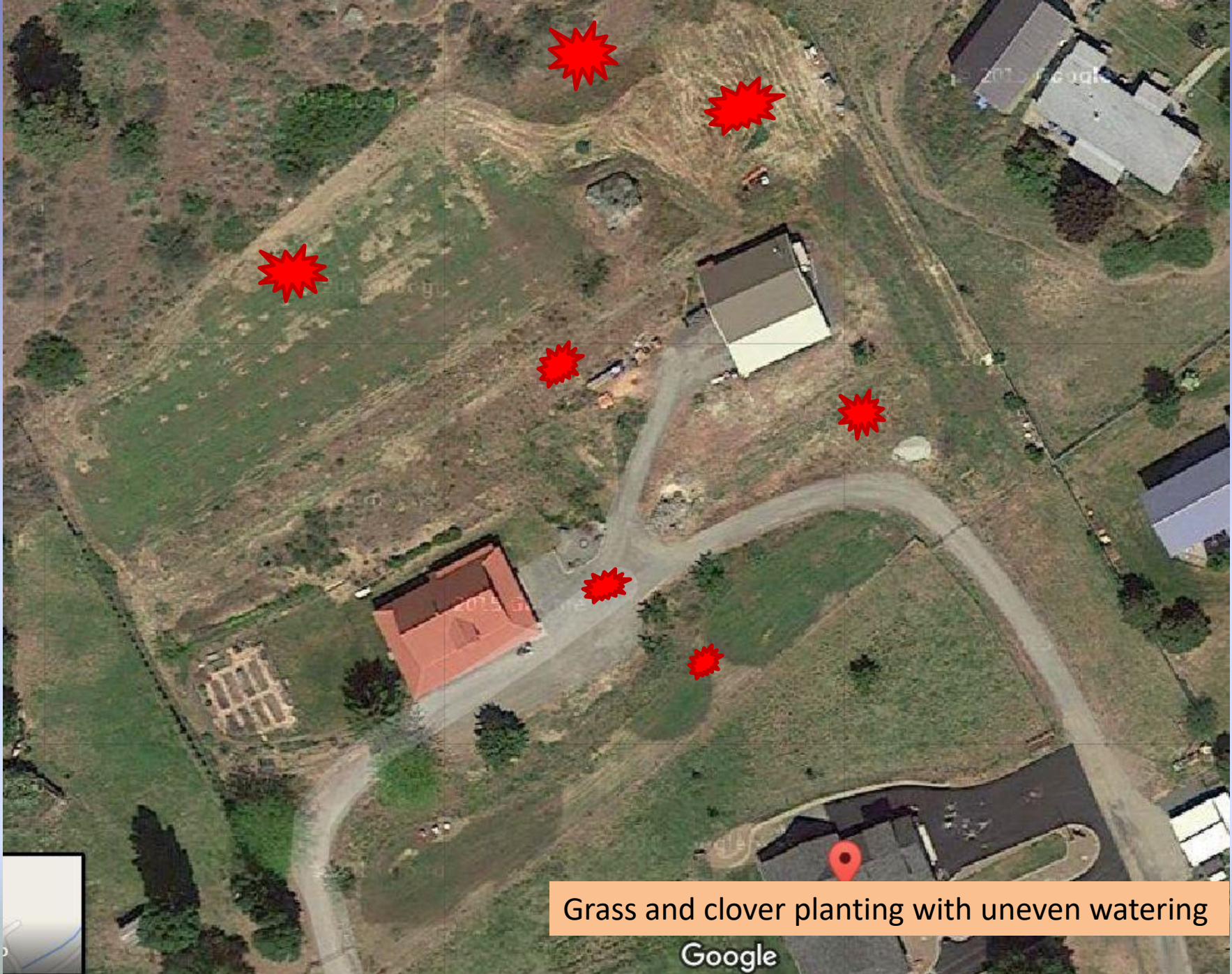
Wood pile and equipment parking

Google



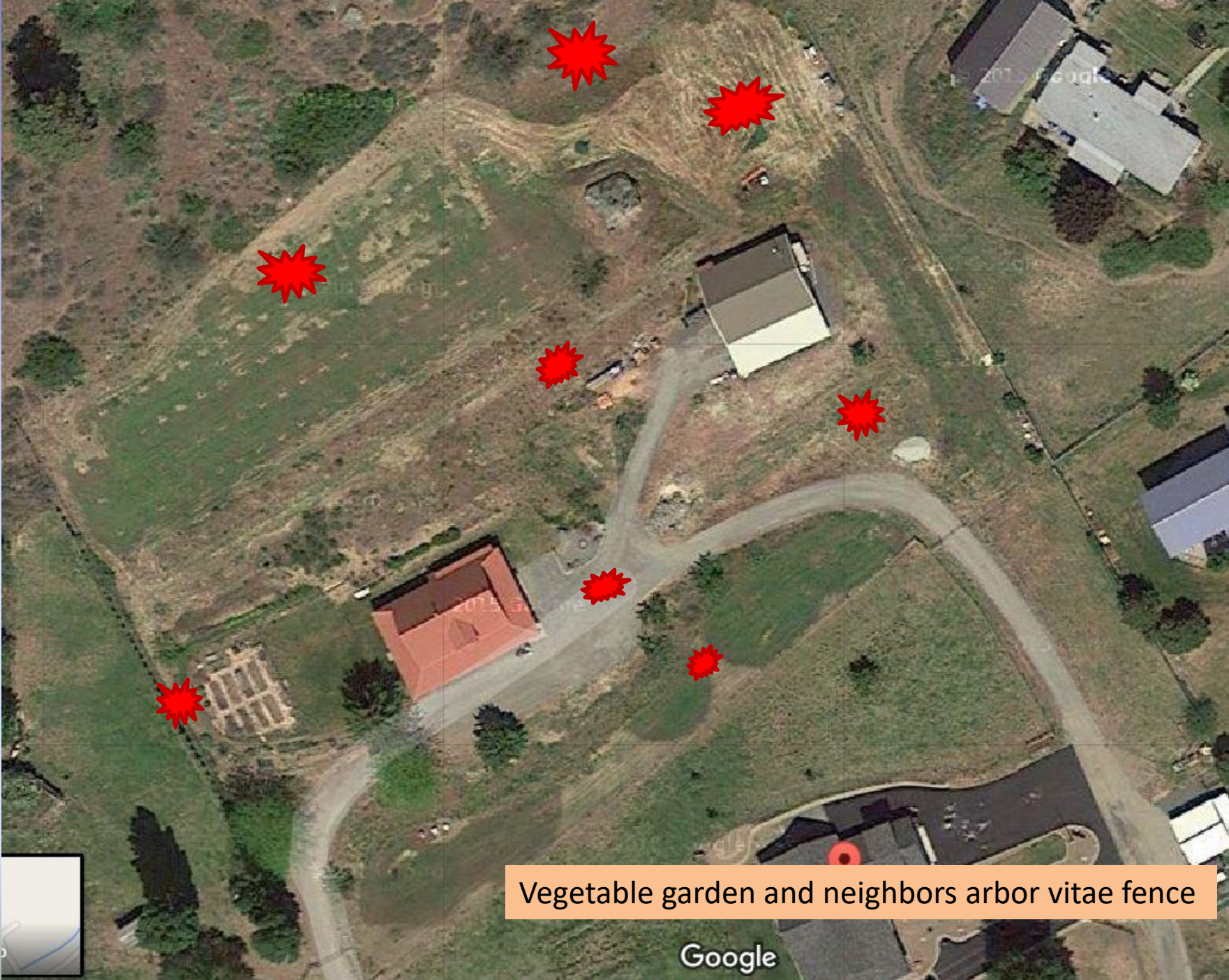
Driveways – lots of gravel

Google



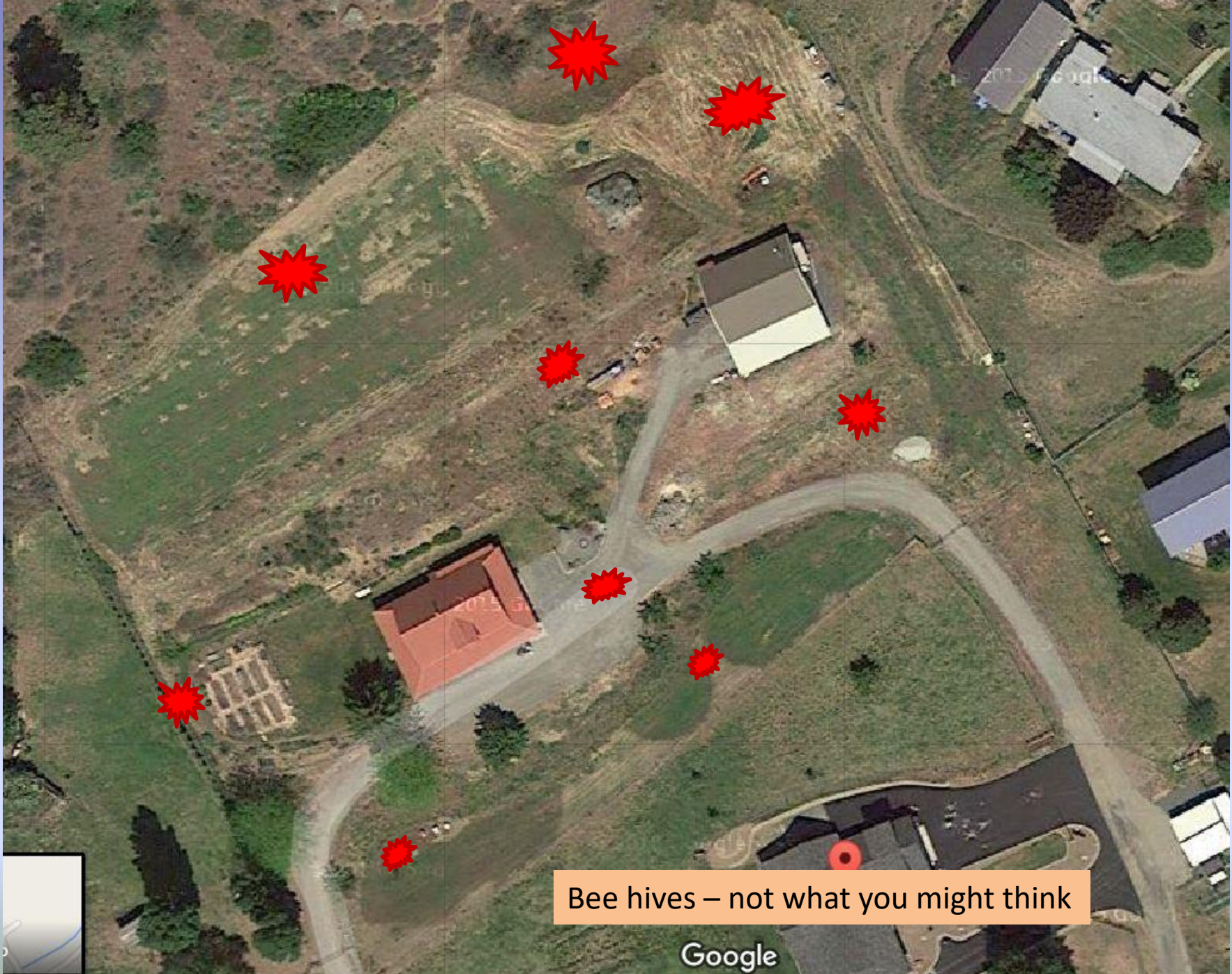
Grass and clover planting with uneven watering

Google



Vegetable garden and neighbors arbor vitae fence

Google



Bee hives – not what you might think

Google



More questions??



http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx



WSU CAHNRS and WSU Extension
Hortsense

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[plant alphabetical order](#)
[common problems](#)
[weed problems](#)






Images:
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Washington State University Extension welcomes you to

WSU Hortsense

A compilation of fact sheets for managing common landscape and garden plant problems.

Ornamentals	Small Fruits	Tree Fruits	Vegetables	Law
				

Enter Search Terms



[Weed Gallery](#) > Mint Family: Lamiaceae

- HOME

- ON THIS SITE

- What is IPM?

- Home & landscape pests

- Agricultural pests

- Natural environment pests

- Exotic & invasive pests

- Weed gallery

- Natural enemies gallery

- Weather, models & degree-days

- Pesticide information

Henbit (*Lamium amplexicaule*)

Henbit is a widespread winter annual or sometimes biennial broadleaf plant. Except for the Great Basin and deserts, it is found throughout California to about 2600 feet (800 m). Dense infestations in winter crops can reduce crop yield significantly. Henbit inhabits agricultural land, open or managed, turf, disturbed sights such as roadsides, and landscaped areas.

Habitat

Open places in managed forests, agronomic and vegetable crop fields, orchards, vineyards, gardens, lawns, landscaped areas, fields, pastures, roadsides and other disturbed, unmanaged areas.

Click on images to





Headlines

- » **Get Ready for National Invasive Species Awareness Week 2016!**
LAWRENCE, Kansas – February 16, 2016 – Volunteers in communities across the nation are getting ready for National Invasive Species Awareness Week, scheduled for February 21-27. The Weed Science Society of America (WSSA) is one of the sponsors of the ... more »
- » **2016 Award Winners Named by Weed Science Society of America**
LAWRENCE, Kansas — February 9, 2016 – The Weed Science Society of America (WSSA) has honored 30 individuals for their outstanding contributions to the field of weed science. The awards were presented during the organization’s annual meeting, held this year ... more »
- » **WSSA Announces Availability of New Education Materials on Weeds and Their Impact**
LAWRENCE, Kansas – February 2, 2016 – Today the Weed Science Society of American (WSSA) announced that new and updated educational materials for both weed scientists and the general public are now available for free download from the Society’s website. ... more »

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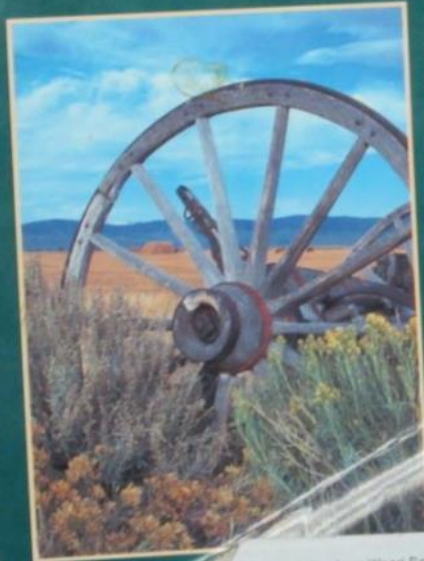
WSSA Annu

Dates: February 6
Tucson, Arizona



We all share responsibility for protecting Washington State from noxious weeds. This site can help you learn how to do your part.

Weeds of the West



Wenatchee County Noxious Weed Board
100 Washington St.
Wenatchee, WA 98801

Noxious Weeds That Harm Washington State

Eastern WA Field Guide

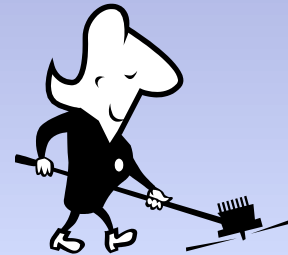


Washington State Noxious Weed Control Board
www.nwpcb.wa.gov
WASHINGTON STATE NOXIOUS WEED CONTROL BOARD
www.nwpcb.wa.gov

10/26/20

Weed Management Planning

- Gather information
- Make a plan
- Execute your plan
- Follow up with monitoring
- Repeat previous steps.....



- **QUESTIONS????**

Chelan County Noxious Weed Control Board contact info:

412 Washington Street (to drop off plants for ID)

Wenatchee, WA 98801

Business phone 509-667-6576

Julie Sanderson, Coordinator

509-667-6550

Julie.Sanderson@co.chelan.wa.us



Find Local Inspiration

