

Drift (Off-Site Movement)

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Drift

- What is drift (off-site movement)?
- Laws (Labeling), Regulations
 - Label statements and permit conditions
- Application methods
- Mitigation
- Incidents

Drift

Drift is the movement of a pesticide through the air away from the intended target. This drift can be in the form of mist, particles, or vapor (gas). It isn't limited to agricultural activities.

When does drift occur?

- Occurs during or shortly after the pesticide is applied.
- Post-application drift occurs after an application is completed.

Law – Label Statements

Law

FAC section 12972:

The use of any pesticide by any person shall be in such a manner as to prevent substantial drift to non-target areas.

FAC section 12973 (Label):

The use of any pesticide shall not conflict with labeling registered pursuant to this chapter which is delivered with the pesticide or with any additional limitations applicable to the conditions of any permit issued by the director or commissioner.

Law - Label Statements

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.
- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

Label Statements - examples

- Do not apply this product in any way that will contact workers or other persons, either directly or through drift...
- Do not apply by ground within 25 feet, or by air within 150 feet, of...
- Spray contact with impervious surfaces, such as roads and rocks, and increasing ambient air temperatures, may result in an increase in the volatility increasing a risk for off-target injury to sensitive crops... (Right of Way)
- Do not apply when temperature exceeds 90°F...
- Do not apply this product to target crops or weeds in bloom... (Pollinators/Bees)

Label Statements

- Do not apply when weather conditions favor drift from treated areas...
- California Use Restrictions: In addition to use restrictions... Do not make applications on any date between November 1 and February 28... (Structural)
- Do not apply when food-handling establishments are in operation or foods are exposed... (Structural)
- Apply when rain is not predicted for the next 24 hours...
- Mix only with water according to label directions. Mixing this product with chemicals (ammonia, acids, detergents, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes... (Water & Pool)

Permit Condition Statements

- No aerial applications of Restricted Materials are to be made within 1/4 mile of:
 - Residential area
 - Occupied labor camp
 - Other areas designated by the Commissioner
- County Department of Agriculture will notify adjacent growers of applications of Restricted Materials (RM) requiring a Notice of Intent (NOI). Growers proposing applications RM will be information regarding their agricultural neighbors. NOI must be submitted 48 hours prior to the proposed application.

Law - Labeling



Law

Labeling/Permit Conditions

BEE CAUTION: This product is highly toxic to honeybees and other bees exposed to direct treatment or residues on crops or weeds in bloom. This product may show residual toxicity to honeybees, especially in humid climates and under slow drying conditions.

Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Limiting application to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to

VI. ALMOND – BEE PROTECTION POLICY

Because of the necessity for bees to pollinate almonds and the need to treat crops nearby, the following procedures will be in effect: Applications of Carbaryl (Sevin®) shall not be made within one mile of almond orchards that are being pollinated by bees, except when there are no blooming plants (including weed bloom) in the treatment area. (A statement of this condition must be on the PCA's written recommendation). For all other applications of pesticides toxic to bees, the applicator shall follow label directions.

Law Label/Permit Conditions



Law – Permit Conditions



Law – Permit Conditions

Merced County Restricted Material Permit Conditions*

2018

Condition 1

MERCED COUNTY AGRICULTURAL COMMISSIONER'S OFFICE RESTRICTED MATERIALS PERMIT CONDITIONS

1. Seasonal or multi-year restricted materials permits are issued to growers or their authorized representatives who have been certified to use restricted materials. Pest control dealers and agricultural pest control businesses must have a copy of the permit in their possession prior to sale, delivery, or application of restricted materials.
2. Permits are valid only for those materials listed. A notice of intent (NOI) shall be submitted 24 hours prior to the use of listed restricted materials. NOIs are accepted by phone, fax, electronic submission through the CalAgPermits program, and at the Agricultural Commissioner's offices.
3. Except as conditioned below, a NOI shall be submitted at least 24 hours prior to the intended application. If the intended application does not take place, permittees must notify the Agricultural Commissioner within seven (7) days after the intended application date. **UNLESS** determined not feasible by the Agricultural Commissioner, the application shall commence within the following four-day period and proceed as scheduled. If applications do not commence within the four-day period, notify the Agricultural Commissioner of the new intent date.
4. NOIs for field fumigations containing the following active ingredients shall be submitted at least 48 hours prior to the intended application².
 - a. metam sodium or metam potassium
 - b. dazomet
 - c. 1,3 dichloropropene
 - d. chloropicrin
 - e. sodium tetrathiocarbonate
- *Accurate maps are required for field and tree-hole fumigations, showing actual distances to property lines, residential areas, sensitive sites (including schools) or other areas determined by the Commissioner, etc. Required buffers shall also be indicated on the map. If a structure will be vacated for the application and REI, please make sure this is indicated on the NOI, recommendation, and map submitted. Refer to these requirements in the absence of specific conditions or regulations pertaining to NOI and map requirements.
5. Before use of fumigants containing the active ingredients metam sodium, metam potassium, or dazomet, the property operator or the property operators designated agent must complete a Department of Pesticide Regulation approved metam potassium/metam sodium stewardship certification training within the previous 12 months of the date of application and hold a valid certified applicators license or certificate.
6. "Other sensitive sites" referred to in Merced County permit conditions shall include, but are not limited to schools, rural residential areas, urban residential areas, sensitive aquatic sites, hospitals, endangered species habitat areas, occupied labor camps, churches, and day care centers
7. Aerial application of restricted materials within 1/4 mile of schools or other sensitive sites may not commence until the notice of intent is verbally authorized by the Agricultural Commissioner.
8. Ground application of restricted materials using air carrier application equipment within 1/8 mile of schools or other sensitive sites may not commence until the notice of intent is verbally authorized by the Agricultural Commissioner.
9. Permits are **not** valid under the following circumstances unless an NOI is submitted **and** a representative of the Agricultural Commissioner gives approval following a pre-application site inspection:
 - a. **Sevin, and other materials harmful to bees** applied to alfalfa. (See Commissioner's Policy relating to bee protection)
10. Emergency exemption (Section 18) permits will be issued on both seasonal and multi-year permits. Permission to use Section 18 pesticides expires at the same time the current Section 18 registration expires. If the Section 18 pesticide is subsequently re-registered, the permittee must appear in person to obtain a new Section 18 permit. Third party special local need (SLN) registrations will be issued with either seasonal or multi-year permits. Third party SLN registrations are in effect until canceled. SLN and/or Section 18 labels must be present at the application site at time of use.
11. Seasonal permits for fumigants on established tree and vine sites are intended for tree-hole fumigations only. Permittees must wait for approval to proceed after submitting the required NOI. NOI's will be conditioned when appropriate with buffer zones and per-day acreage limitations. Prior to approving NOI's, the permittee must have a signed

*Conditions 7 (Chloropicrin), 9 (Dazomet, metam sodium, metam potassium), 12 (Commodity fumigation), and 15 (Methyl Bromide Field Fumigations) available upon request

Regulation

3CCR 6000 – Definition

Substantial drift – the quantity of pesticide outside the target area is greater than which would have resulted had the applicator used due care.

Regulations

3CCR sec. 6600. Gen. Standards of Care summary

Each person performing pest control use:

- Equipment in good repair and safe to operate
- In a careful and effective manner
- Methods and equipment to insure proper application
- Under climatic conditions to insure proper application
- Precautions to avoid contamination of the environment

Gen. Standards of Care – 3CCR 6600

Equipment in Good Repair



Gen. Standards of Care - 3CCR 6600

Careful and Effective Manner and Climatic Conditions



Gen. Standards of Care - 3CCR 6600

Careful and Effective Manner and Climatic Conditions



Gen. Standards of Care – 3CCR 6600

Methods and Equipment...



Regulations

3CCR sec. 6614. Protection of Persons, Animals, and Property summary.

- (a) An applicator prior to and while applying a pesticide shall evaluate all the equipment to be used, meteorological conditions, the property to be treated, and surrounding properties to determine to likelihood of harm or damage

Drift Regulations

3CCR sec. 6614 continued....

(b) Notwithstanding substantial drift would be prevented, no pesticide application shall be made or continued when there is:

- (1) A reasonable possibility of contamination of the bodies or clothing of persons...
- (2) A reasonable possibility of damage to crops, animals, or other public or private property; or
- (3) A reasonable possibility of contamination of public or private property, including the creation of a health hazard, preventing normal use of such property...

Protection of Persons, Animals, and Property – 3CCR 6614(b)(1)

Possibility of contamination of persons not involved



Protection of Persons, Animals, and Property – 3CCR 6614(b)(1)

Possibility of contamination of persons not involved



Protection of Persons, Animals, and Property 3CCR 6614(b)(3)

Possibility of contamination, non-target, including the creation
of a health hazard



Drift - Policy

Policy: ENF 2000-034, Pesticide Drift Incident Policy

Drift - the pesticide that moves through the air and is not deposited on the target area at the time of the application.

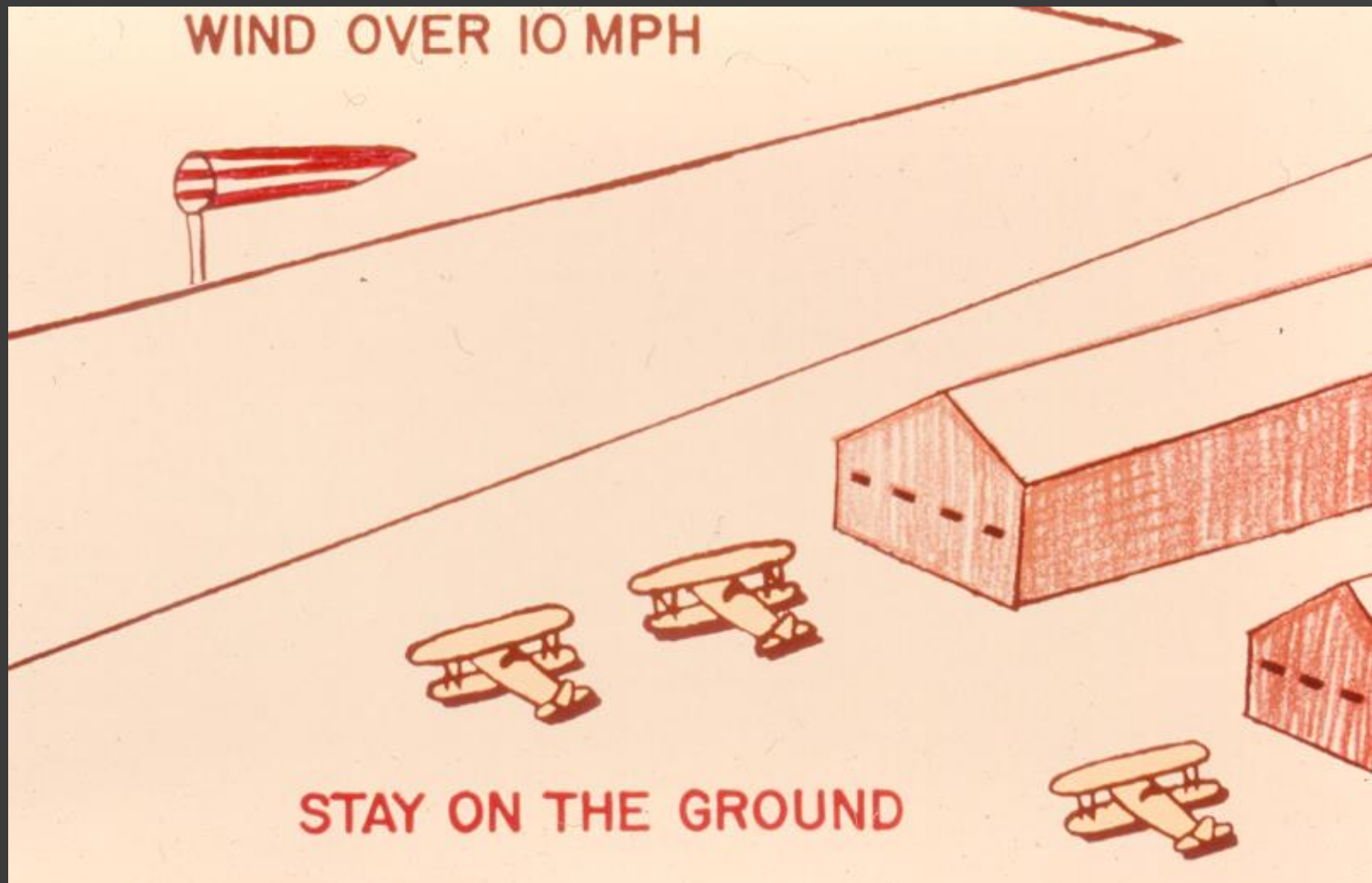
Application Methods

Application Methods



Mitigation

Environmental Conditions



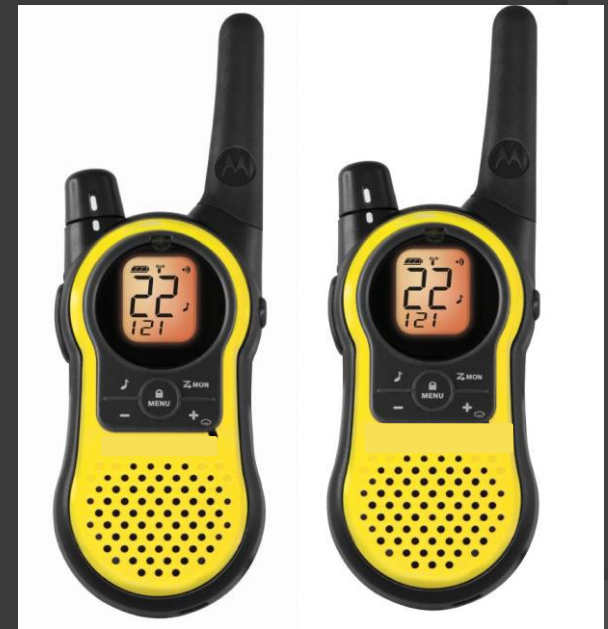
Aerial Equipment Fixed-Winged Aircraft



Environmental Conditions

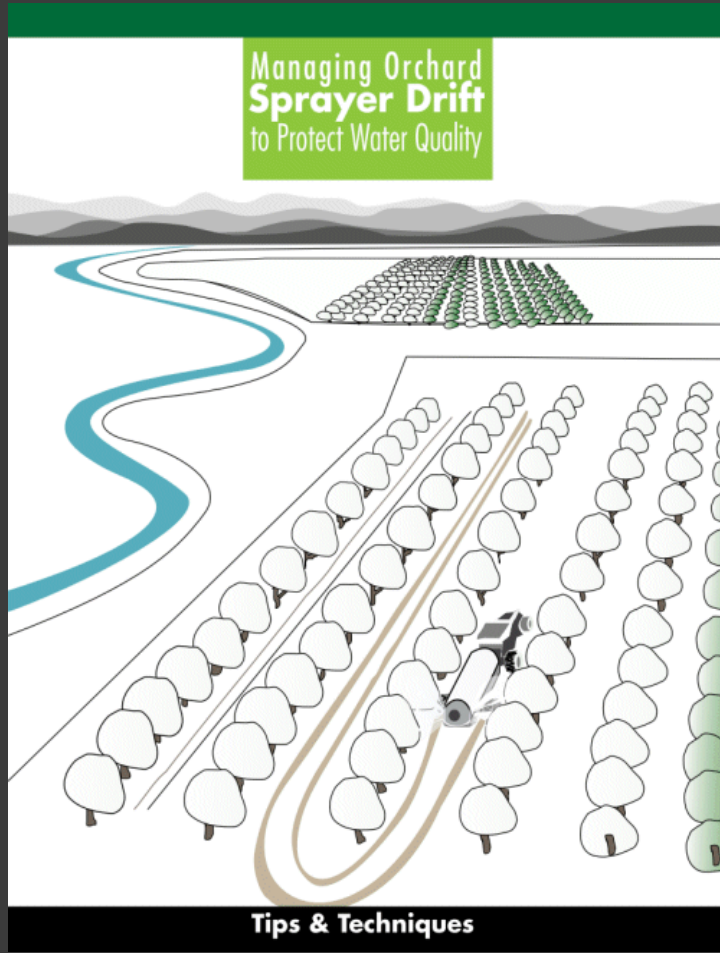


Communication

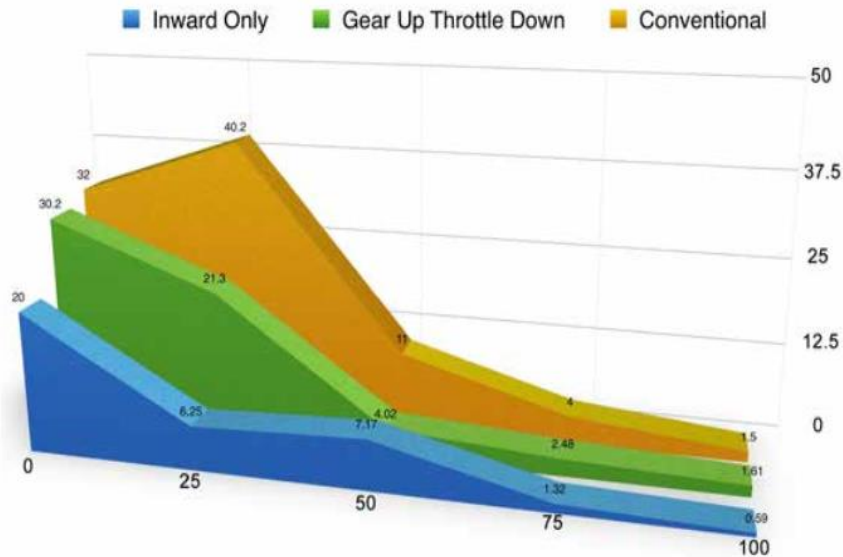


Good Management Practices

Managing Orchard
Sprayer Drift
 to Protect Water Quality



Drift From Outer Edge of Orchard

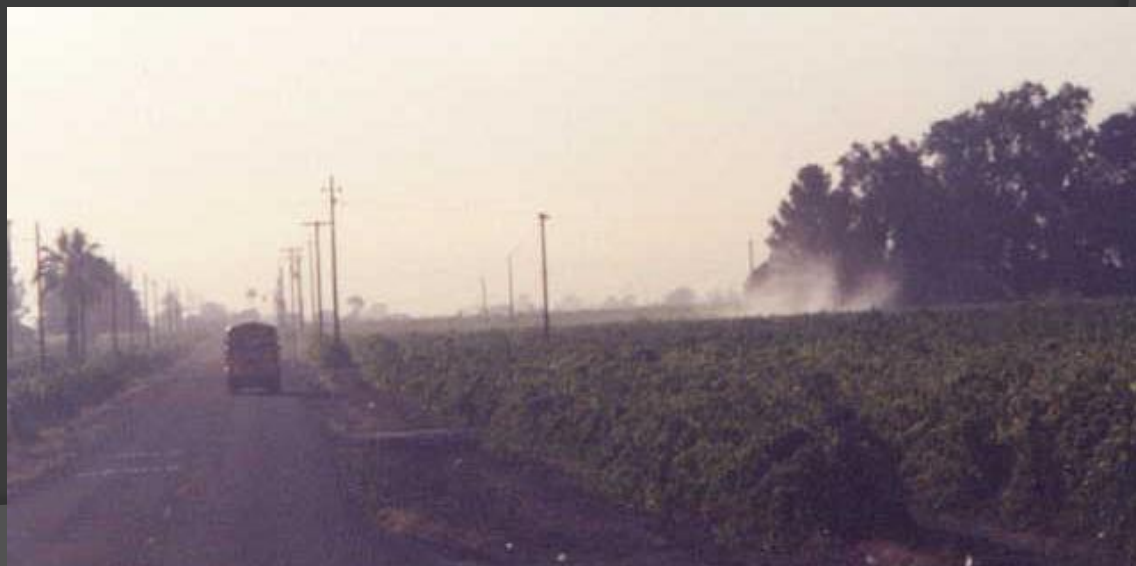


Spray drift was measured from the edge of the orchard following each treatment. Both gear up throttle down and inward only showed reduced drift in comparison to the conventional treatment method.

Equipment and Timing



Timing



Timing



Timing



Incidents

Air-blast Sprayers and Vehicles



Bakersfieldnow.com/Tuesday, January 22nd 2019 (KBAK/KBFX photo)

Air Applications and People

Alfalfa

Table grape
Harvesters



Application by Air
to alfalfa field west
of a table grape
vineyard being
harvested. The pilot
was making is
passes over the
harvesters



Fumigants – Neighborhoods and Workers



Structural Settings Branch II – Pets, Ponds, Play Sets



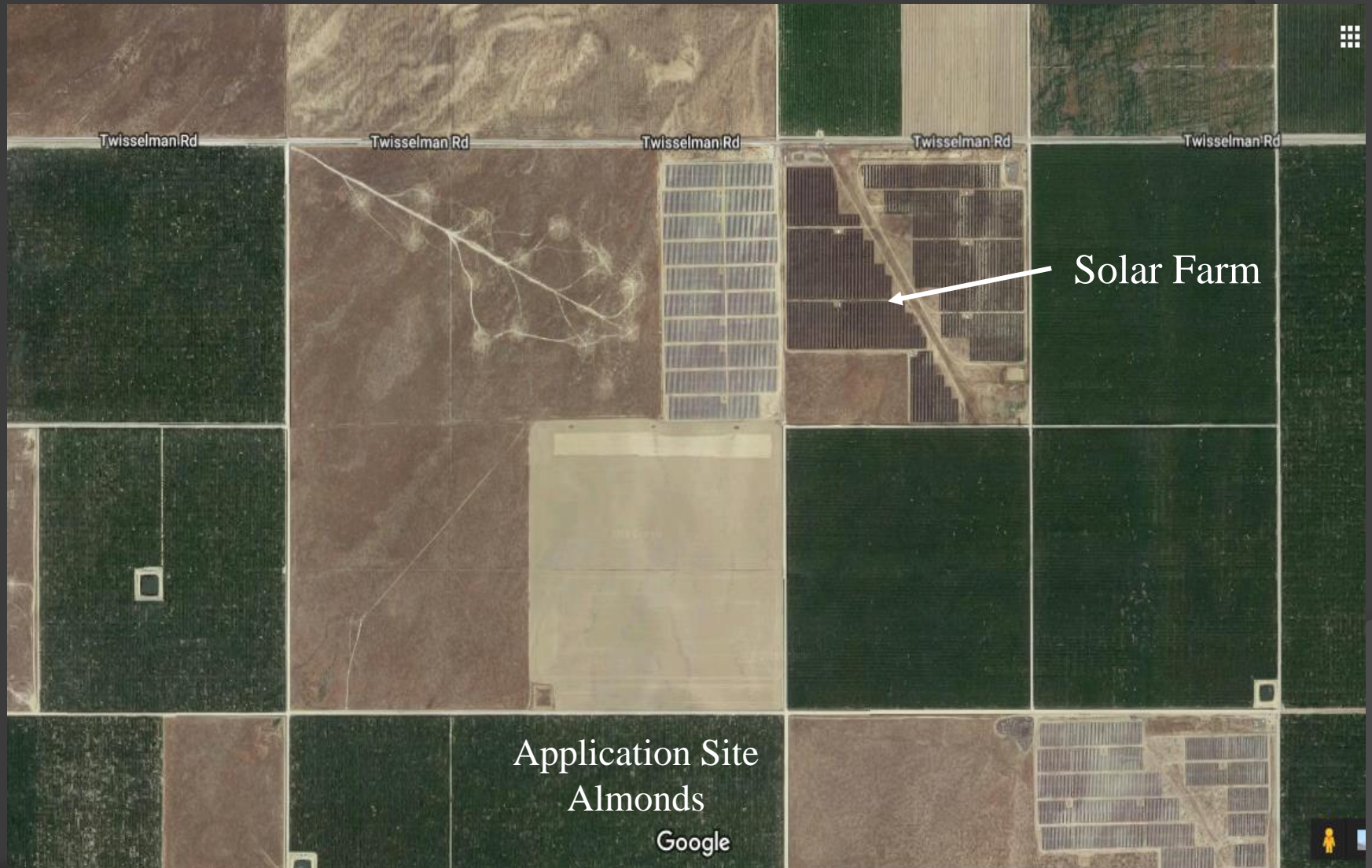
Structural Settings Branch II - Businesses



Structural Settings Branch I – Homes, Offices, and Banks



Agricultural Settings – Construction Crews



Agricultural Settings



The Californian Aug 28 2015 image

Non-Agricultural Settings



Non-Agricultural Settings



Non-Agricultural Settings



Non-Agricultural Settings - Pools



Review

- What is drift?
- Laws (labeling), regulation, and policy
- Incidents
- Methods of application
- Ways to mitigate drift

Review

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Our mission is to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced-risk pest management.

Questions?

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