Using PUR data to follow
Fumigant Use Trends
and Predict
Regulatory Impacts
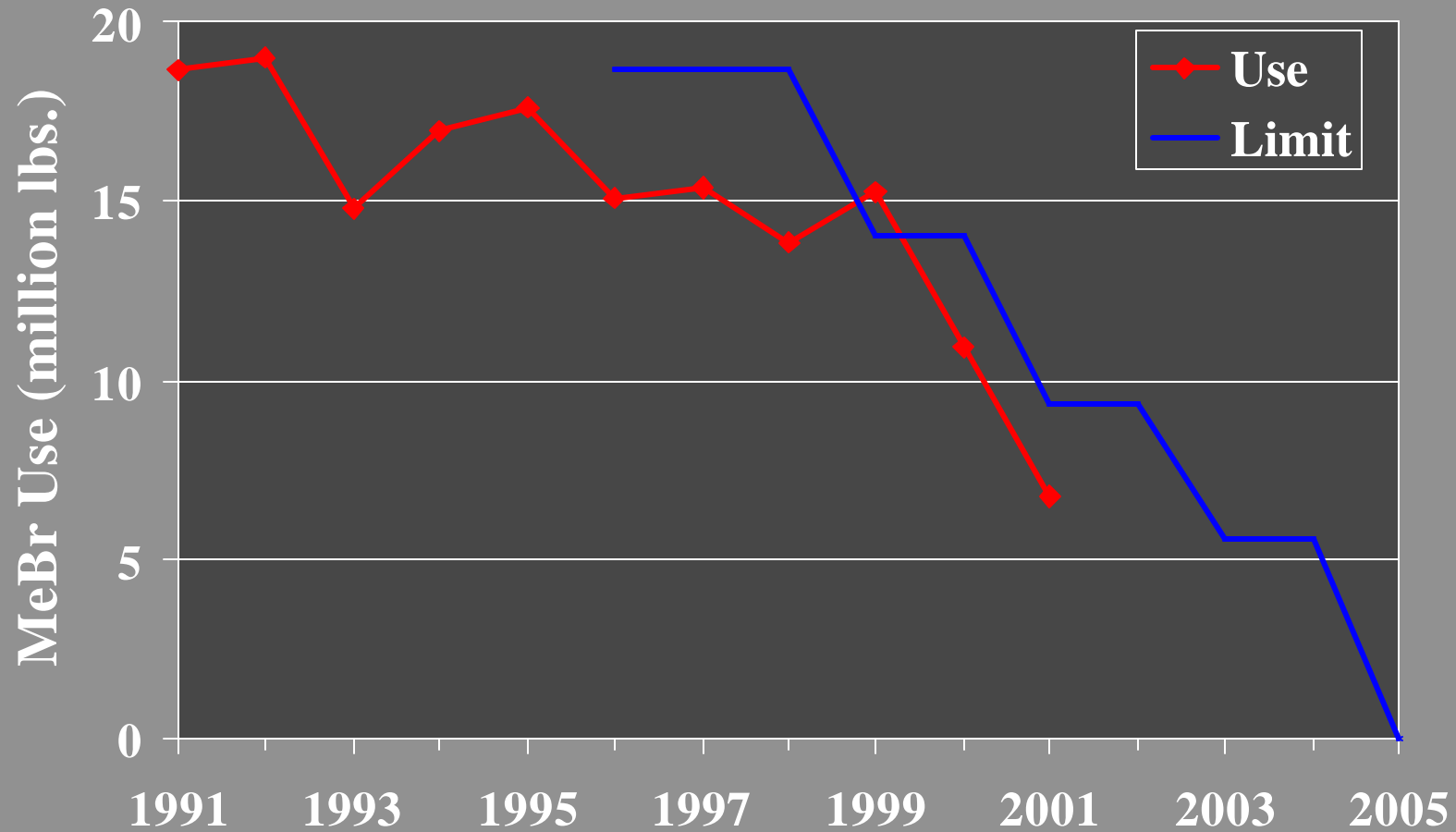
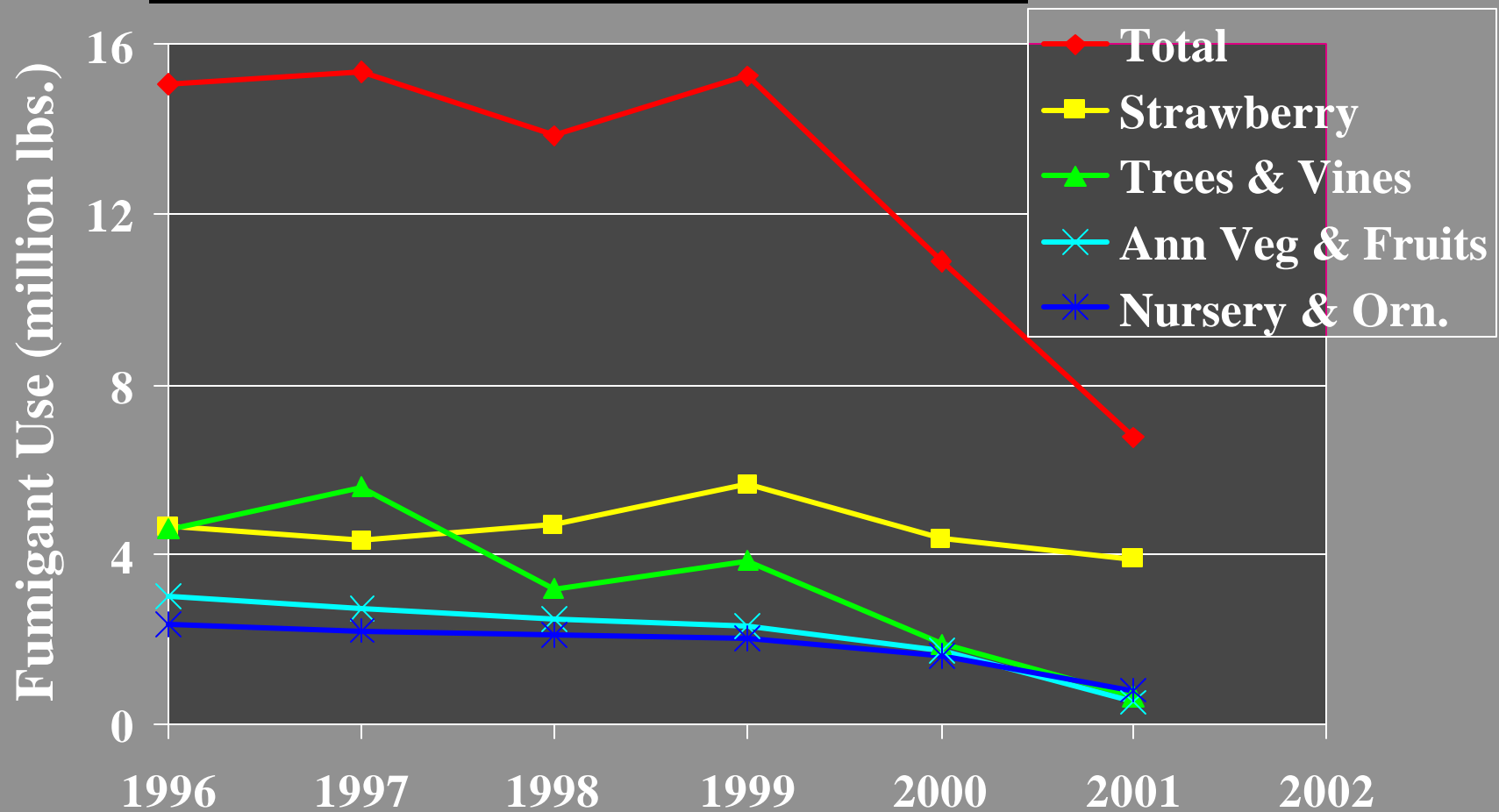### Tom Trout

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Methyl Bromide Use in California
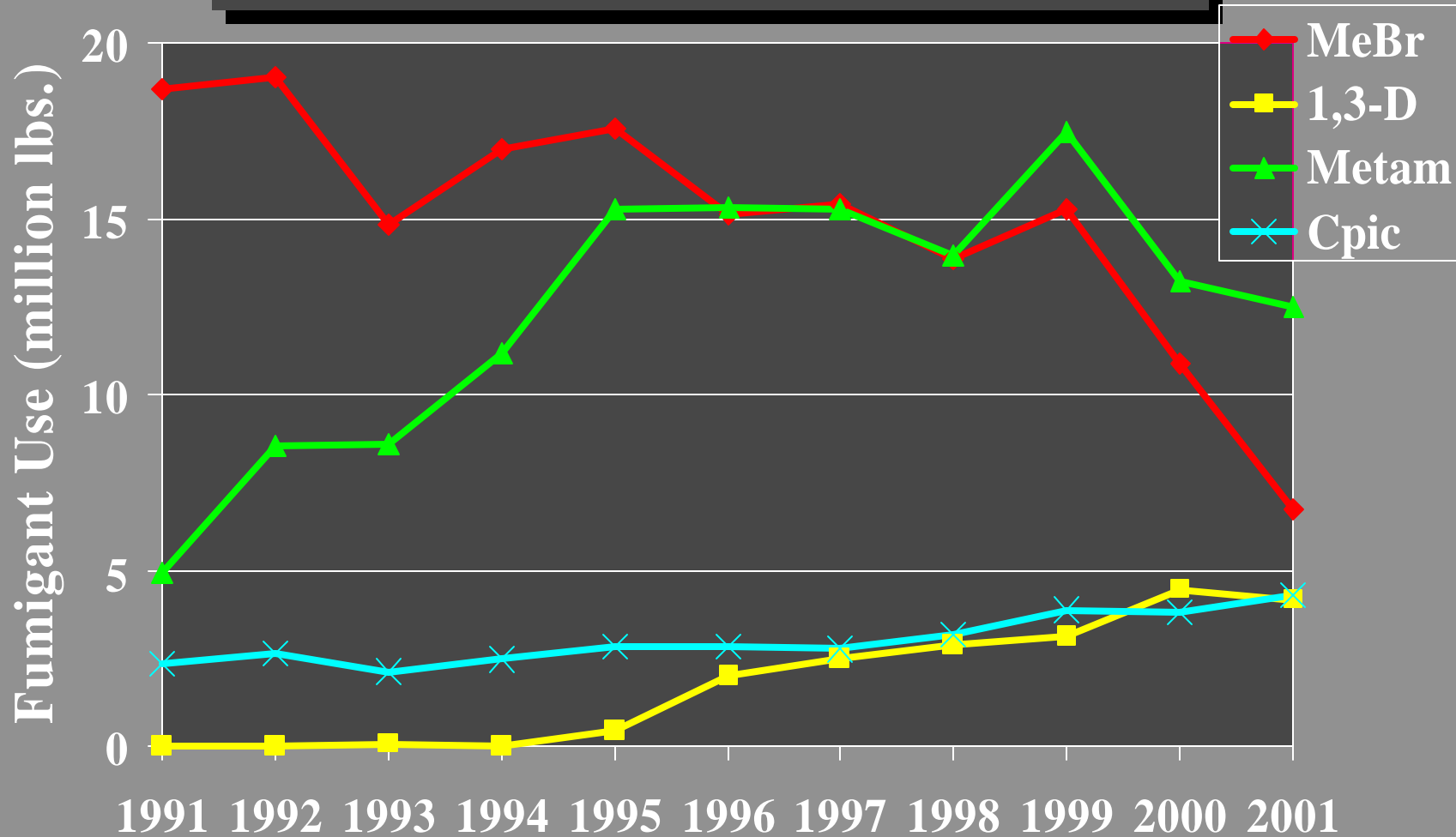## from CDPR PUR database

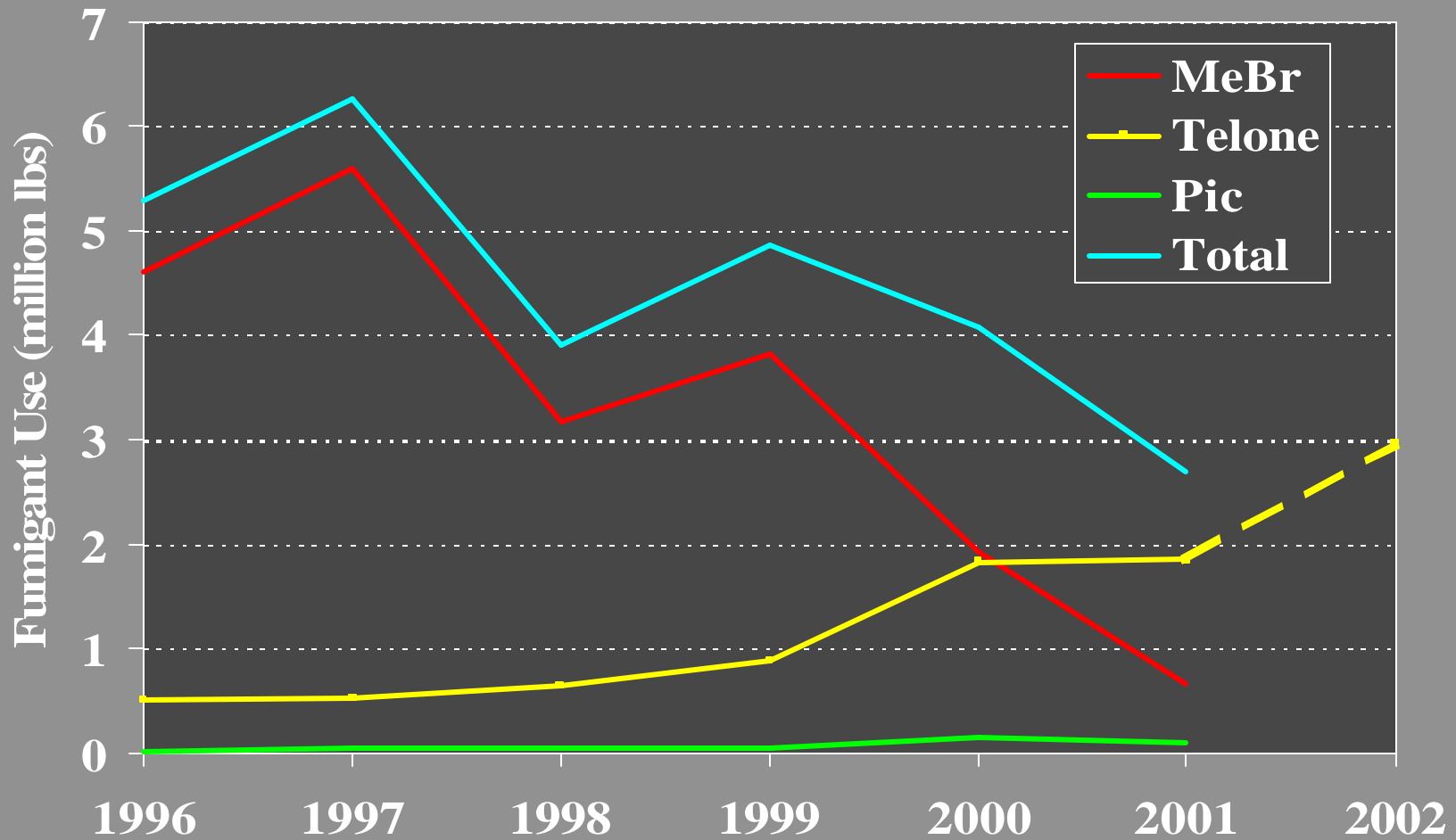# MeBr Use in California
from CDPR PUR database

Fumigant Use in California
from CDPR PUR database

Fumigant Use for Perennials
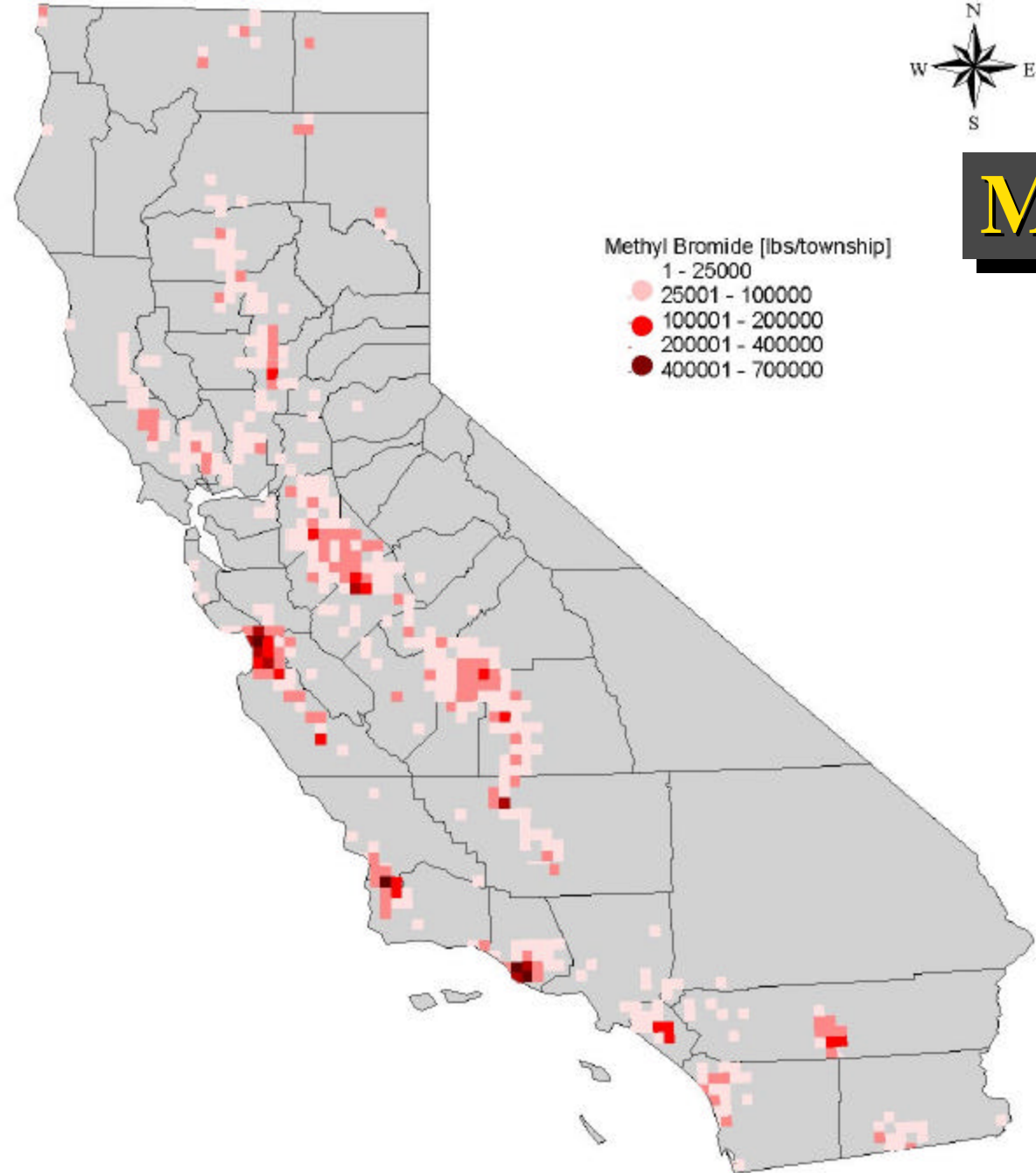
MeBr Use 1999

Methyl Bromide [lbs/township]
1 - 25000
25001 - 100000
100001 - 200000
200001 - 400000
400001 - 700000

1,3-D (Telone) Township Caps

CA Recommended Permit Conditions
for 1,3-D Products (Telone)

Township Caps – No more than 90,250 "adjusted" lbs per township (36 sq mi) can be applied per year *(currently doubled)*

Township Caps

- Intent – limit total applications, and thus long-term air concentrations, in a geographical area
- 90,250 *(180,500)* lbs (9600 *(19,200)* gal Telone II) ("adjusted") in 36 sq mi (23,040 ac) township per year
- Can fumigate only 1 – 5% of total acres
  - 273 *(546)* ac perennials (1%) (deep shank, max rate)
- Application factor
  - Varies between 1.0 and 2.3, depending on application method and depth and time of year

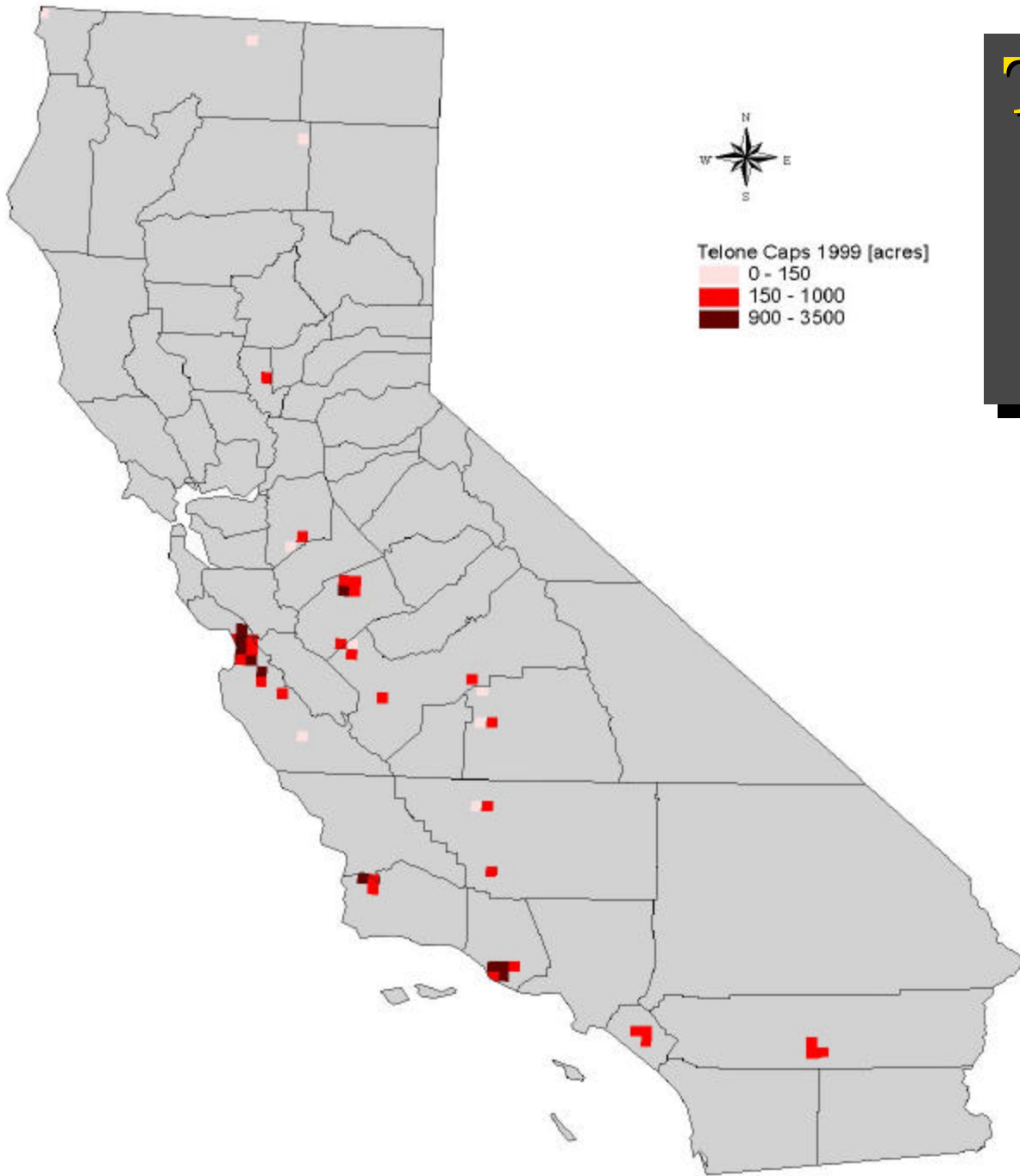# Question: What will be the impact of the Township Caps on Availability of Telone for the various Commodities

Predicted Impact of Township Caps

- Assume all crops that used MeBr or Telone will want to use Telone at present rates and application methods

- Use CA DPR PUR database to predict townships where caps will be exceeded

- Allocate excess acres proportionally among crops.

Predicted Impact of Township Caps

- Only 2/3 (80%) of previously MeBr + Telone fumigated area could use Telone

- Only 1/3 (1/2) of strawberries could use Telone

- Would limit use on sweet potato, nurseries, ornamentals, and vegetables.

- Impact on trees and vines is low because of less intense fumigation – 90% (95%) can use.

Townships that would exceed the Telone Caps

Telone Caps 1999 [acres]
- 0 - 150
- 150 - 1000
- 900 - 3500

Database Manipulations

- Import records from CD to PC (ACCESS database)
- Divide into types: soil fumigation, post-harvest, and structural
- Determine Crop Fumigated (Site Code)
- Determine Area Fumigated (Acres Treated)
- Error check out-of-range applications
- Set up Look Up table of expected rates and application factors
- Set up Queries to manipulate data

Database Manipulations

- **Import: Too large for PC – Import by county and cull out non-fumigant records**
  - Use Visual Basic Module (batch file)

- **Divide into types: pre-plant (soil), post-harvest, and structural fumigation**
  - Can be difficult. Use Site Code, Unit Treated, Record ID

Database Manipulations

? **Determine Crop Fumigated (Site Code)**
- 1000 records (1 million lbs) assigned to "soil application"
- Use grower/field/township crop info

? **Determine Area Fumigated (Acres Treated)**
- Eliminate double applications (combination treatments)
- Correct/modify unknown (U) and incorrect units
- Error check applic. rates for out-of-range

? **Error check out-of-range applications**
- Verify with DPR

Difficulties

- Assigning Crop
- Correcting Area Treated
- Assigning fumigation type
- Delay in availability

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San Joaquin Valley Agricultural Sciences Center

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