

WEED WATCH

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OF
AGRICULTURE

YELLOW STAR THISTLE



WHY DO WE CARE ABOUT INVASIVE WEEDS?

- HIGHLY AGGRESSIVE – DISPLACE NATIVES AND DESIRABLE PLANTS
- DECREASE WILDLIFE HABITAT – FORMING MONOCULTURES
- REDUCE RECREATIONAL VALUES AND USES
- DECREASE LAND PRODUCTIVITY AND VALUE
- HARD TO CONTROL – TAKES DILIGENCE!
- CONTRIBUTE TO SOIL EROSION AND LAKE/STREAM SEDIMENTATION
- NOXIOUS WEEDS RATED IN CALIFORNIA

WEED WATCH ALIEN INVADERS

- Dalmatian toadflax – A rated
- Knapweeds – A rated
- Oblong spurge – B rated
- Canada thistle - B rated
- Tall White top – B rated
- Hoary Cress – B rated
- Purple loosestrife – B rated
- Scotch thistle – A rated
- Russian knapweed – A rated
- Stinkwort – Not rated
- Tocalote – C rated



DALMATIAN TOADFLAX

- Native to the Mediterranean
- Came to U.S. in 1874
as an ornamental
- Yellow Toadflax is
Often sold as an
ornamental
“Butter and Eggs”



- Aggressive, highly competitive
- Produces 500,000 seeds a season
- Deep tap root can go 1 meter in soil
- Lateral roots “Bud”



NO BOUNDARIES



SPURGE

- Oblong spurge – B rated
Euphorbia oblongata



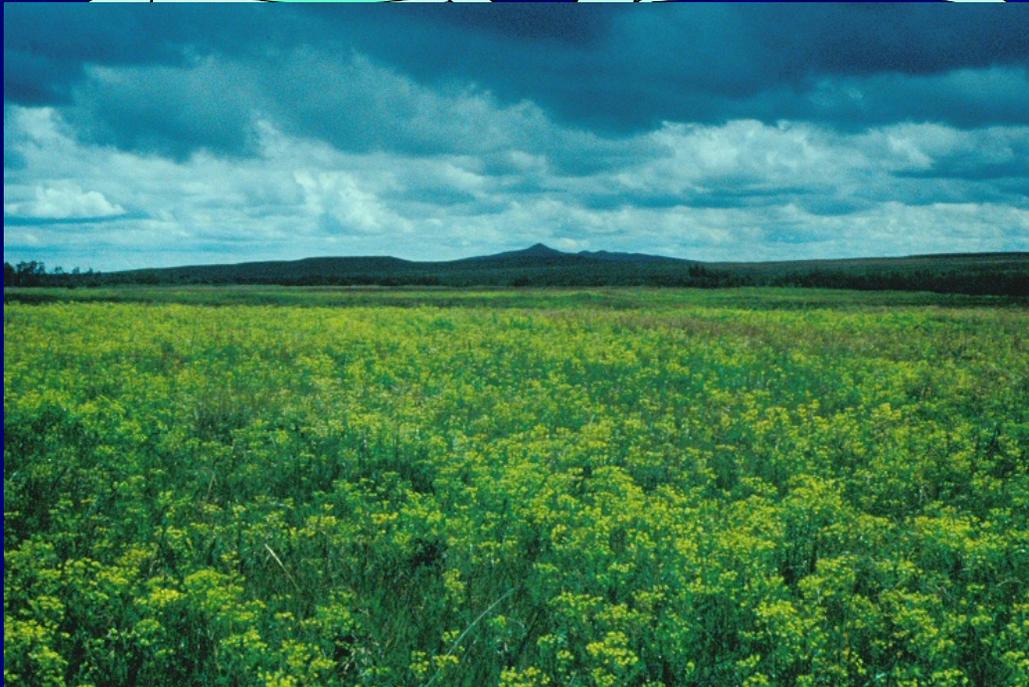
- Leafy Spurge – A rated
Euphorbia esula

Infests more than
5 million acres in
35 States



EXTREMELY AGGRESSIVE

- Extensive creeping roots



Latex Sap is toxic
to many animals
and humans

Oblong spurge in Camino





KNAPWEEDS

- Spotted knapweed – A rated
Centaurea maculosa
- Diffuse knapweed – A rated
Centaurea diffusa
- Squarrose knapweed – A rated
Centaurea squarrosa

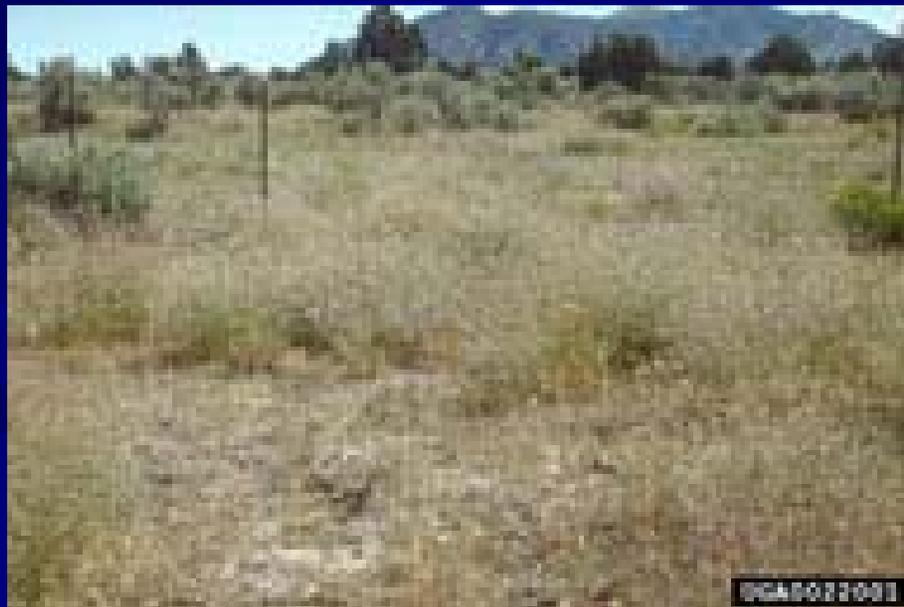


AGGRESSIVE REPRODUCTION

- Spotted Knapweed
 - 400,000 seeds per plant
 - Lateral roots reproduce
- Diffuse knapweed
 - Stems break off and plants tumble dispersing seeds
- Squarrose knapweed
 - Seed heads



- Spotted and Diffuse are biennials.
- Squarrose is a Perennial.









- Spotted knapweed arrived on the west coast in 1893.
- By 1920, had established itself in 24 counties, in 3 states
- Now, Spotted knapweed has established itself in almost every county in the western U.S.
- In Montana alone 5 million acres have been invaded

PURPLE LOOSESTRIFE

- *Lythrum salicaria*
- Introduced mid 1800
- Used ornamentally
- Established in 40 States.
- Costs approximately \$45 million/year in control



AGGRESSIVE REPRODUCTION



■ Reproduces from
Seeds

Shoots

Roots



Up to 300,000 seeds

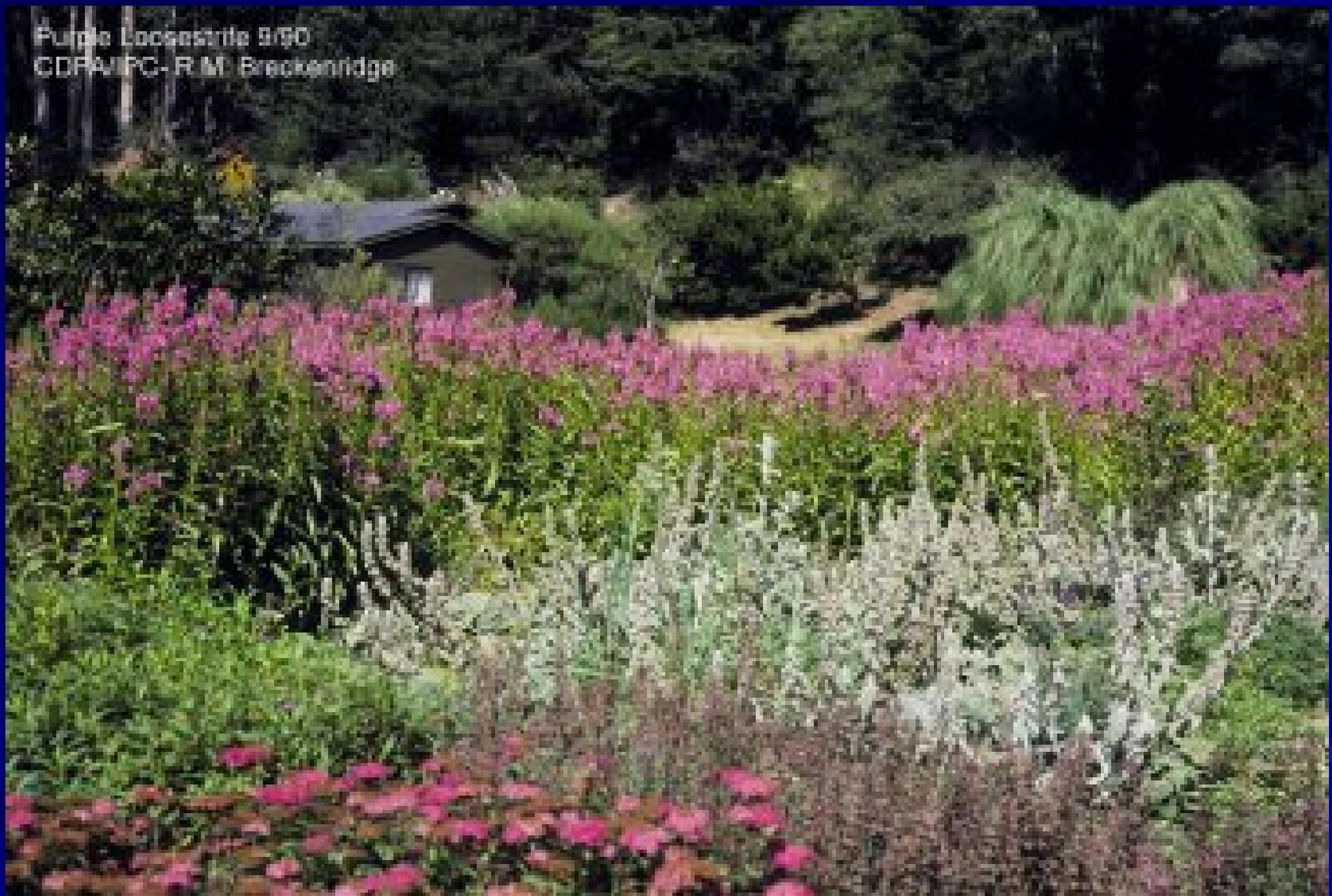
per plant per year

NOTHING IS SAFE



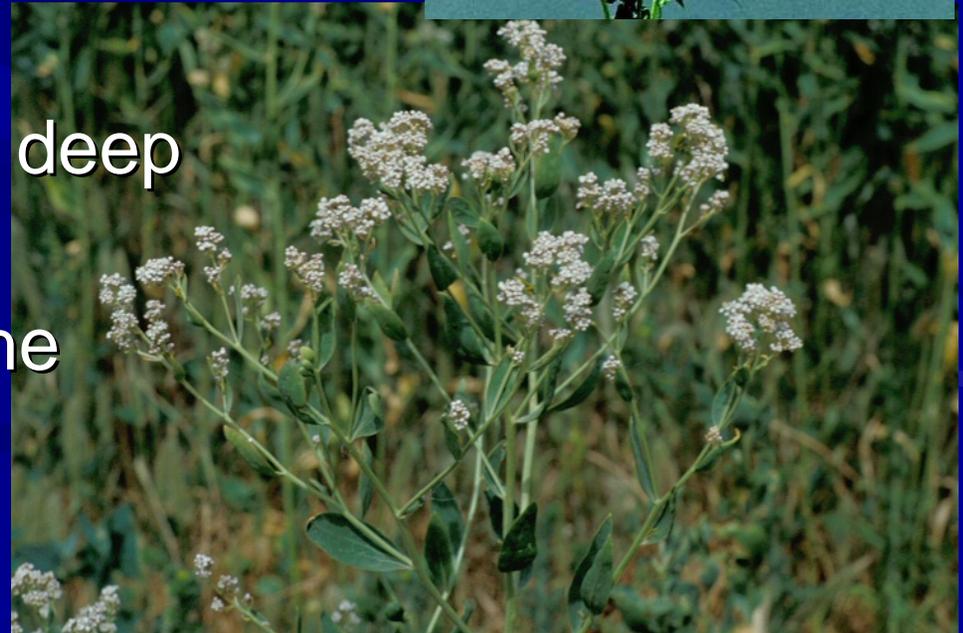
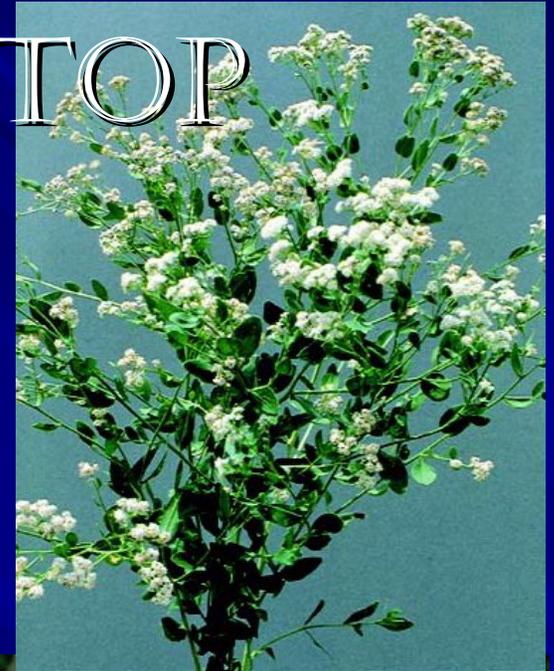


Purple Loosestrife 9/90
CDPA/IPC - R.M. Breckenridge



TALL WHITE TOP

- *Lepidium latifolium*
- Introduced 1936
- Perennial pepperweed
peppercress, iron weed
- Typically in seasonally
wet or moist sites
- Brings up salts from deep
underground and
deposits them on the
surface.



AGGRESSIVE ROOT SYSTEM

- Creates an extensive root system. 10 Foot depths
- Spreads 10 feet/year
- Habitat variations - sea level to 9000 feet.
- Invaded all 48 of the contiguous states, except Arizona



TALL WHITE TOP







EROSION



FALLEN LEAF LAKE

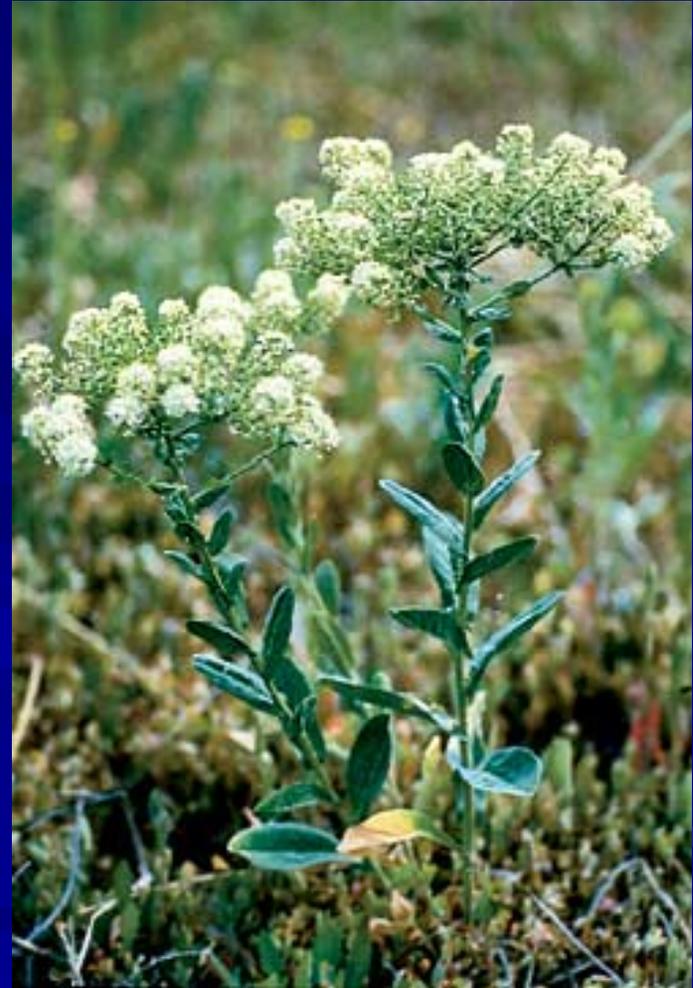


AFTER...HOPE!!



HOARY CRESS

- *Cardaria* genus
- Yreka - 1876
- Deep persistent roots
- In 1 year a single plant spreads 12 feet
produce 455 shoots
~ 4800 seeds





CANADA THISTLE

- *Cirsium arvense*
- Native to Europe
- Introduced in the 17th Century in Canada
- Riparian habitats



ROOTS, ROOTS, ROOTS.....

- Extensive root systems
vertical and horizontal
roots extend 2-3 m



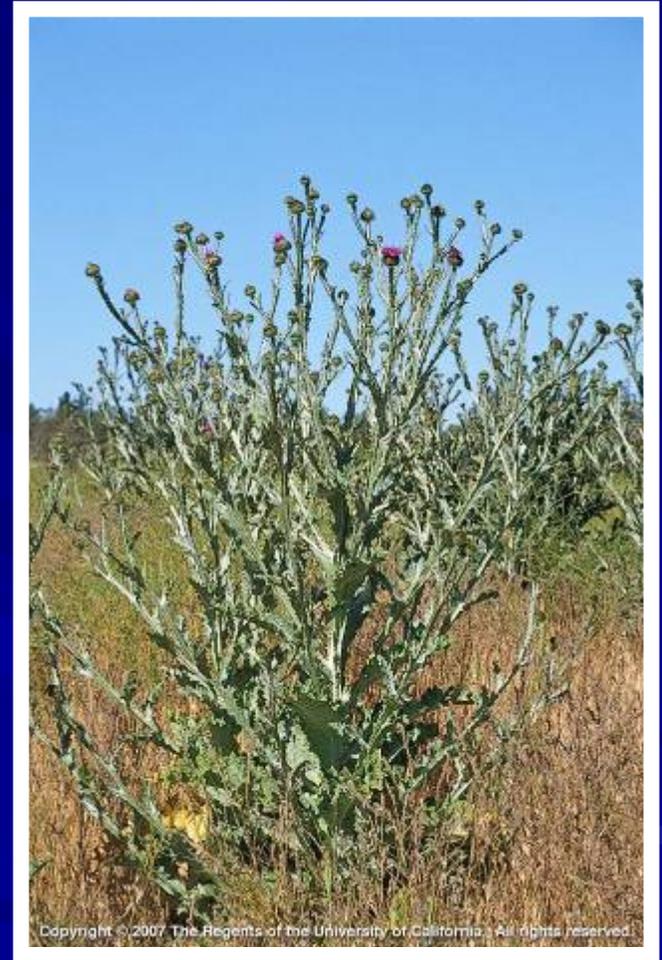




Canada thistle infestation along 1-90

SCOTCH THISTLE

- *Onopordum acanthium*
- Biennials
- Taproot
- Seed Banks viable
7 – 10 years
- 20,000 – 40,000 seeds
per plant



J. M. DiTomaso

MONSTERS ?



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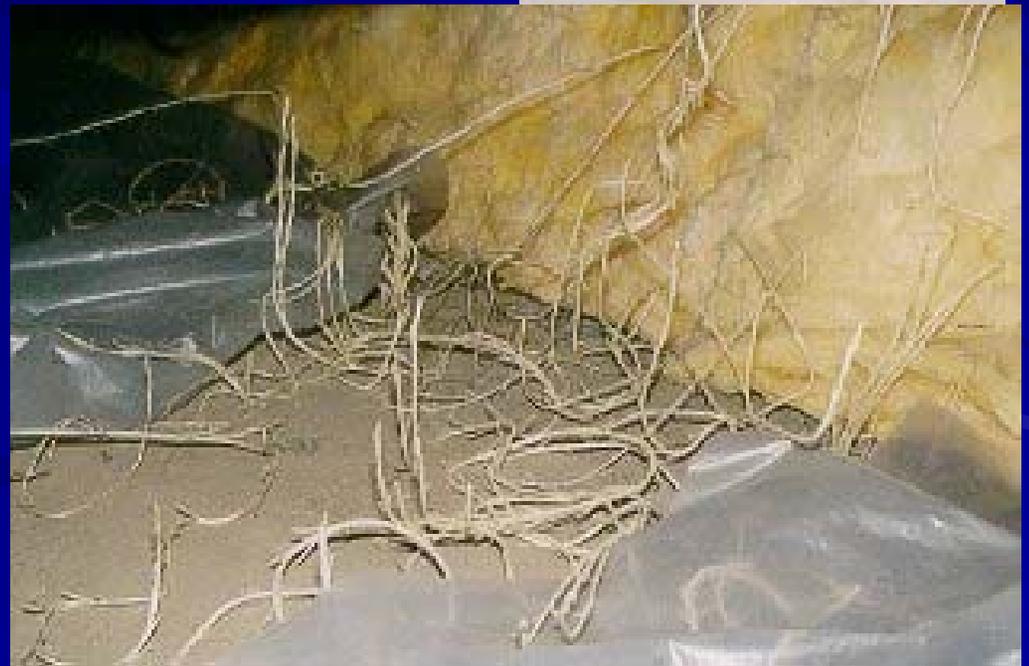
RUSSIAN KNAPWEED

- *Acroptilon repens*
- Extensive Creeping
Branching Roots
- Accumulates zinc-
8x normal zinc levels
in soils



AGGRESSIVE INVADERS

- Crawl space of recently built house
- 3ft of soil excavated prior to building



ALPINE COUNTY



STINKWORT

- Annual
- Grows to about 3 feet
- Rapidly invading



■ *Dittrichia graveolens*



- Aromatic
- Sticky hairy foliage
- Skin irritant





- Can taint milk and meat of livestock
- Seedheads can get imbedded in the intestinal wall of livestock



TOCOLATE

- *Centaurea melitensis*
- 1 to 60 seeds per head.
- 1 to 100 heads per plant
- Annual or biennial
- Reproduces by seed





WEB SITES

- California Invasive Plant Council

<http://www.cal-ipc.org/>

- CDFA – Encycloweedia

http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm