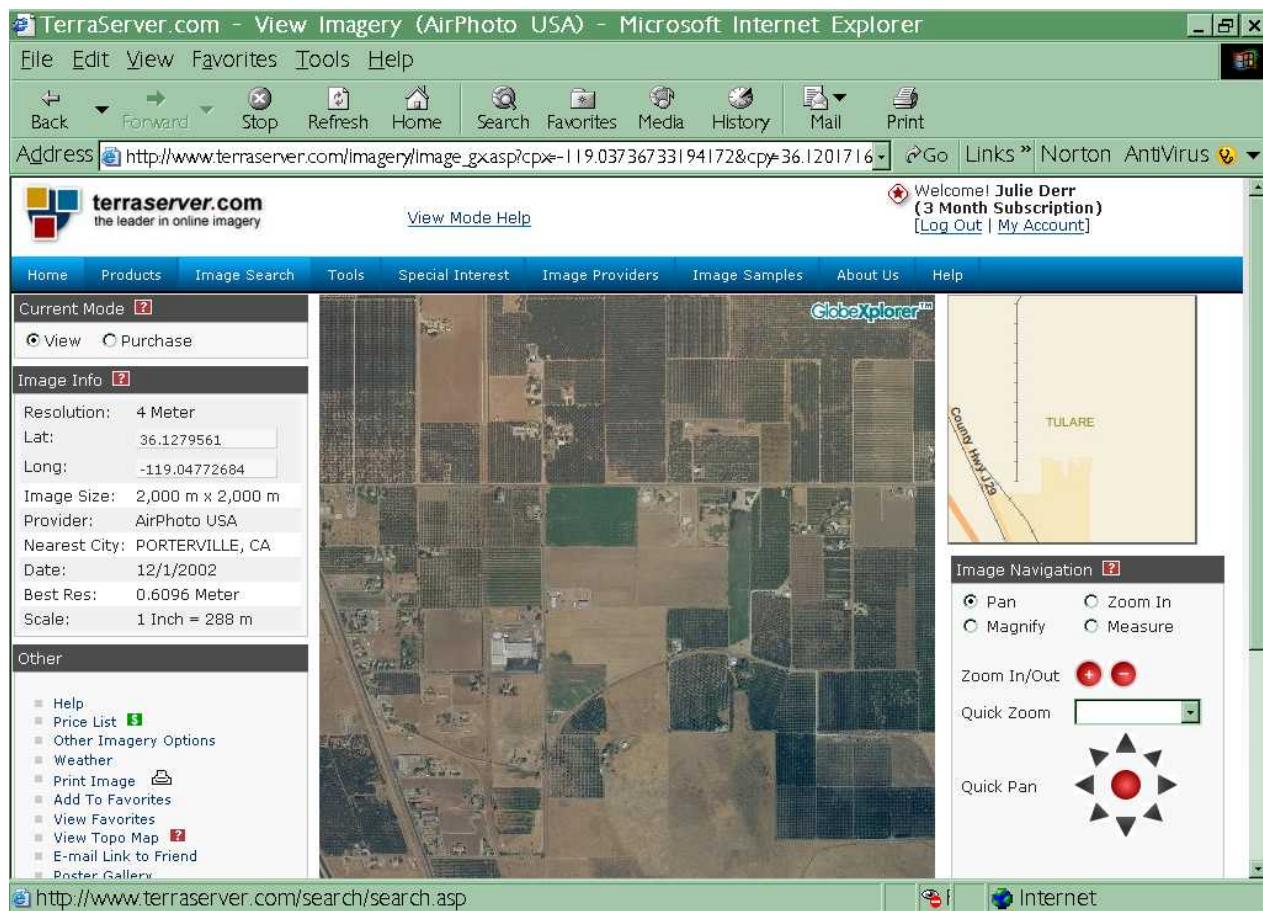


APPENDIX

CALIFORNIA PEST CONTROL DISTRICTS – A “How To” Manual: Location of Host Plants

Addendum to the June 30, 2005 Publication



Central California Tristeza Eradication Agency

Olive Mapping Database

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Database Description

Scope

The Olive Mapping Database is designed to facilitate the tracking of information related to olive trees, specifically regarding the information related to pest control issues. The primary pest we are attempting to control is the olive fruit fly.

*The olive fruit fly, *Bactrocera oleae* (Diptera; Tephritidae) was first recorded in California in October 1998, when a single female fly was captured in west Los Angeles. By fall 1999, olive fruit flies had been captured in seven additional counties including Tulare County in the San Joaquin Valley, the leading table olive-producing county in California. Presently, the olive fruit fly occurs in at least 41 counties in California and threatens virtually all commercial and fruit-bearing ornamental olive plantings.¹*

Some of items of interest are:

- Location of a grove of olive trees
- Approximate Number of trees on the grove
- Environmental and cultural conditions that could influence monitoring or treatment of pests.
- Providing a reference for the pest control district to facilitate the location of traps

We are attempting to track all olive trees in our jurisdiction. This includes trees owned by individuals for decorative purposes and producing trees used for table olives or olive oil. Regardless of whether a tree's fruit is harvested, the olives can still act as hosts and spread fruit flies. So even one tree in one person's back yard can affect a large number of producing trees.

Amateur gardeners are often not aware of the need to control olive-related pests, so they do not tend to report their trees or spray for pests. This means that a special effort needs to be made to locate and identify olive trees on residential property. The problem could be even worse if the trees are untended. If the owners of the trees do not care about maintaining their trees, then the fruit will soon become breeding grounds for another generation of *Bactrocera oleae*.

There is no legislative requirement to report the sale or purchase of an olive tree, so it is difficult to track down who is buying and planting olive trees at their homes. This data may be the only way to contact the owners of these plants.

Database

The Database can be broken down into three distinct sections.

1. Olive Groves

This incorporates information such as location, number of trees, watershed, adjacent hosts, and the owner and manager contact information.

2. Mapping

Logs the status of maps for each map section. As sections are mapped, the paper map is filed and scanned, and the information regarding that map is saved in the database. While the map imagery is not actually stored in the

¹ University of California, Agricultural and Natural Resources web site:
<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74112.html>

database, individual maps are accessible through buttons in the Mapping and Groves screens.

3. Contacts

Individuals or corporations that own the olive trees are listed here. Managers and caretakers are listed here as well. This information can be edited here directly, and can also be accessed through the individual olive grove records.

Procedures

Olive Groves

Create a new grove

1. Start at the main menu. Click  Olive Grove List to open the Olive Groves window.
2. Click the **New** button at the bottom of the window. 
3. Enter all the relevant information.
4. The name and address in the **Owner Information** are required to be identical to the information on the property deed. Fill out the owner's name and physical address as it is listed on the deed.
5. To select the owner's mailing address, click in the **Mailing Address** box and start typing the owner's name.
 - a. If the owner exists, the name will appear. *Check for similar or alternate names* if you can't find the owner's name immediately. For example, Charles Moreno and his wife may own a property under the name "Moreno, Charles and Rebecca" and another property under the name "Moreno C R". Ensure that they don't get duplicate mailings by selecting an existing contact rather than creating a new one.
 - b. If the owner does not exist, you can click the **New** button  to create a new owner contact record.
 - i. Enter the owner's *mailing address* here.
 - ii. Click **Save** when you are finished.
 - iii. If you receive an error message when trying to save this record, it may already exist in the contacts database. Cancel the changes and select the appropriate contact in the Mailing Address box.
6. If the property has a manager or caretaker, type the manager's name in the **Manager** box. If the manager already exists, it will be selected. If it does not, click the **New** button  next to the manager box to create a new manager.
7. If there is another contact for the property, this can be added the same way as the owner or manager.

Splitting a block:

If the grove contains a large number of trees, it may be necessary to split the block.

1. Ensure that the information in the block is correct.
2. Check the tree count. The tree count should be the number of trees in the *first* block.
3. Enter the block number for the *first* block.

4. Now click the **Duplicate Block**  button.
5. You are now on the second block. Edit the tree count and block number.
6. Repeat the last two steps for each additional block.

Modify an olive grove

1. Start at the main menu. Click  **Olive Grove List** to open the Olive Groves list.
2. The olive groves list has 4 unlabelled boxes at the top. These are the filter boxes. Each box allows you to type in or select items to filter the list underneath. Each box filters on the field below it in the list. If, for example, you are looking for Arthur Dent's properties, click in the box above the column titled "OwnerName" and start typing "Arthur Dent".
3. Once the whole name appears in the box, press the Enter key. This will filter the list below to give only Arthur Dent's groves. Click the **Clear** button to clear the filter list and show all of the available groves.



Arthur Dent
OwnerName
MALDY LEROY J & SANDRA G (TRS)
REFFIELD RONALD F (TR)

4. Double-click on any item in the list to open that grove for editing.

Database Reference

Main Menu

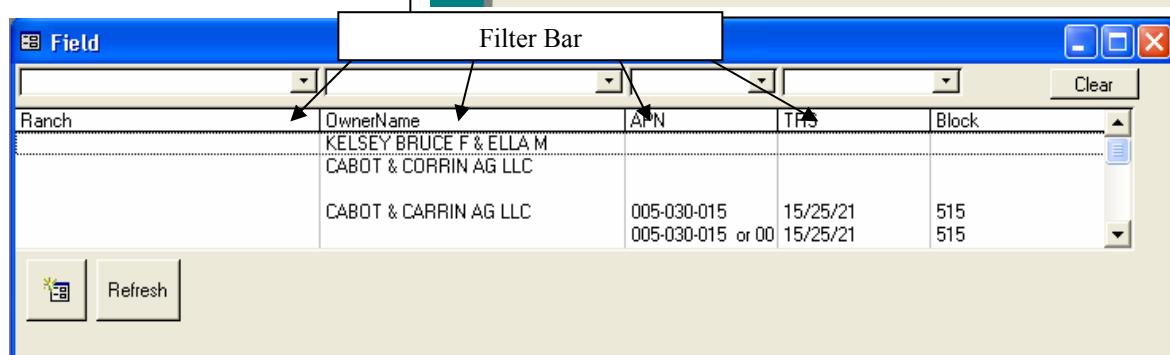
The main menu has 5 items:

1. Olive Grove List
2. Mapping
3. Mapping Reports
4. Contacts
5. Print Mailing List

Olive Mapping

- Olive Grove List
- Mapping
- Mapping Report
- Manage Contacts
- Print Mailing List

Olive Grove List



Field					Filter Bar			
Ranch	OwnerName	APN	TRS	Block				
	KELSEY BRUCE F & ELLA M							
	CABOT & CARRIN AG LLC							
	CABOT & CARRIN AG LLC	005-030-015 005-030-015 or 00	15/25/21	515 515				

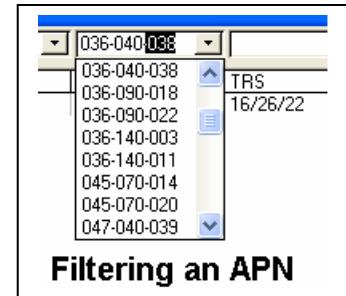
 Refresh

This image shows the Grove List. This list displays basic information about all the olive Properties currently being tracked. From here, you can select a grove for editing, create a new grove, and filter the grove list to make it easier to find the grove you want to work with. Double-click on any item in the list of groves to work with that item.

Filtering the list

To filter the list, either pull down the drop-down box above the column you are interested in, or start typing in the box. For example, if we were looking for the Grove with APN 036-040-038, we would start typing “036-04”... and Access will figure out the rest of the APN for us. Pressing ENTER will lock in the filter and show only Properties with that APN.

To clear the filters and show the entire Properties list, click the button in the upper-right labeled “Clear”.

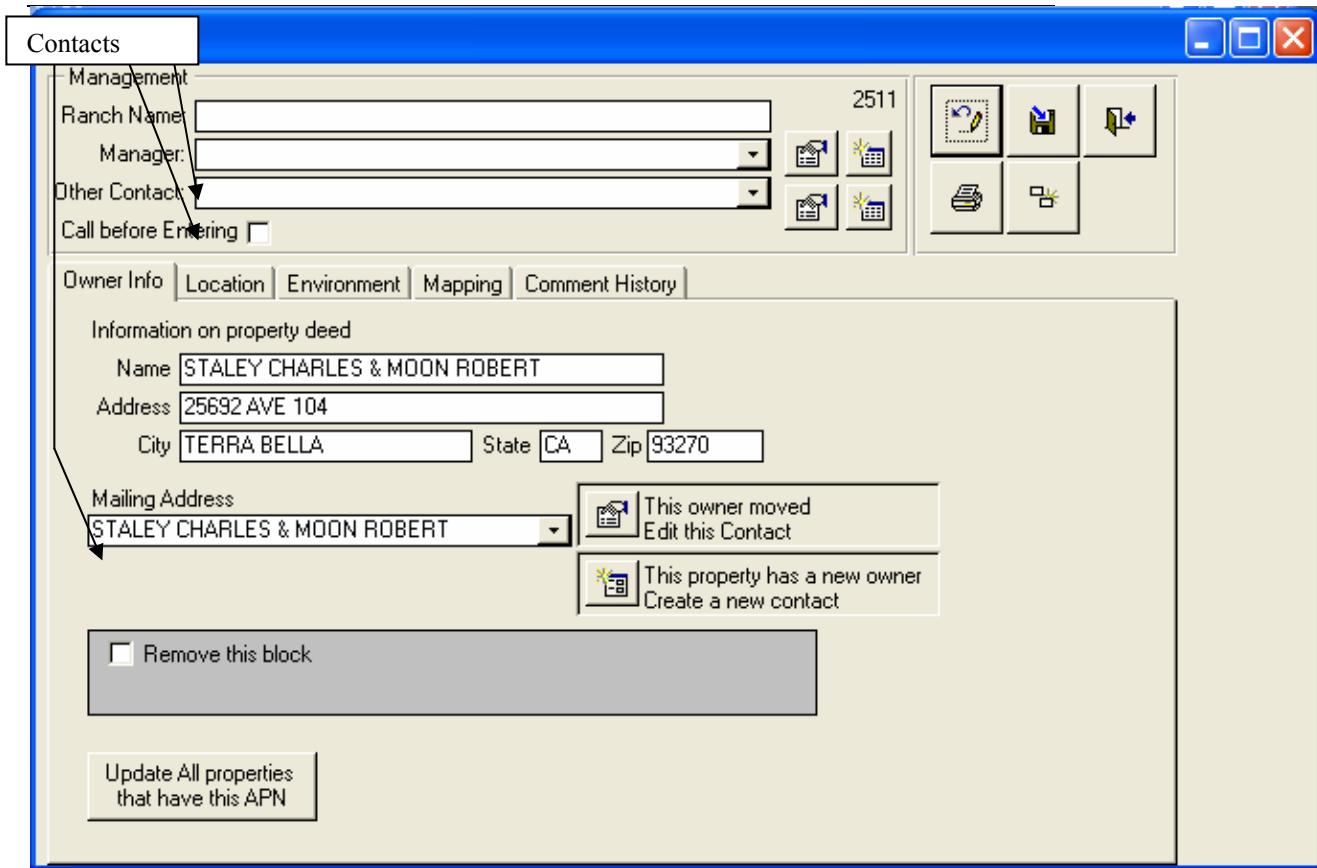


Adding New Properties

To create a new entry in the database, you can click the “New” button located in the lower-left corner.



Grove Window



Above, we have the Grove window.

The Grove window is divided into several tabs with related information in each tab.

Ranch Name is the name of the ranch or grove (not the owner's name). Not all ranches have names, so this field is not required.

Manager is also optional. This lets you designate a contact that is our point of contact for this grove.

Other Contact designates an additional person or company that we may need to communicate with regarding this grove. There is no current expected use for this field. This could also be an additional address for the owner, the manager, or could be name of an on-site caretaker.

The two buttons next to Manager and Other contact are the **Edit Contact** and **New Contact** buttons. When some information about the contact changes (such as their phone number), use the Edit Contact button. When a different person or company is being assigned as the contact, you can use the drop down box to select the new person, or use the New Contact button to create a new contact. *Never use the Edit Contact button to change a contact from one name to another.* For example, if Ford Prefect is the old manager, and the new manager is Trisha McMillan, you do not want to use the "Edit Contact" button. Instead, either type "Trisha McMillan" in the manager box, or click "New Contact".

When **Call Before Entering** is checked, a small text box will appear. Enter contact instructions here, such as "Call owner at least 24 hours prior to entry", or "Gate is locked. Call 555-2236 to meet mgr with key"

The buttons in the top right deal with managing the physical record in the database:

-  **Undo:** This reverts the record back to its state after the last time the save button was clicked or the record was opened, whichever happened last
-  **Save:** Permanently saves the record to the database. This also creates tracking notes in the “Comment History” indicating which fields were changed.
-  **Exit:** Saves the record and closes the window. It is **not** necessary to click the save button when exiting the record. It will be written to the database automatically.
-  **Print:** Prints a contact sheet for this record. This can be used in the field for recording changes.
-  **Duplicate Record:** will create a copy of this record. This is usually used to split a block in to two or more pieces to control the number of trees in one collection block.
To split a block: follow these steps:
 1. Ensure that the data in the current record is correct before you split it. Information such as year planted and variety will not be as easy to update after the split.
 2. Decide how many trees will be in each block. If a block has 100 trees, and you want to split it in to three blocks of 40, 30, and 30 trees, set the tree count (in the location tab) in this first block to 40 trees.
 3. Click the Duplicate Record button. *You are now on the newly created block.* Edit the tree count.
 4. Click Duplicate Record again for each additional block. Edit the tree count after duplicating the block.

Owner Info Tab

The first tab is the “Owner Information” tab. This contains the information that is on the deed for this grove and mailing address for the owner. In addition, the top of the window contains additional slots for two more contacts: a manager and an “Other” Contact.

You can assign a contact to a Grove by clicking the drop-down button on the right side of the box. This will show all the available contact records. The small button to the right of the box allows you to edit the contact’s information. The next button over allows you to create a new blank contact record that will be assigned to this Grove.

Before we go any further, it’s important to understand contacts. If you are editing the information for a Grove, you may need to change the owner’s contact information, or you may need to transfer the Property to a new owner.



The rule of thumb is this: *when changing an existing owner’s address, click the “Update contact” button. When Transferring the property to a new owner, click the “New contact” button.* This is important, because many Properties can share one contact. If only one Grove is sold, and the owner’s other Properties stay with that owner, you don’t want to change the information for all of the other Properties that person owns.

The **Update All Properties with this APN** button allows you to push this owner deed information to all of the other blocks with this APN. Use this when you have changed the address of one block in an APN, and you need to quickly copy that information to the rest of the blocks.

Update Mailing Address will change mailing address on the currently assigned contact. DO NOT USE THIS if the Property was sold or transferred. Instead, create a new contact with the new owner’s name. Then you can close the contact window and click “Update Mailing Address”.

Remove This Block This allows you to hide the block, whether it is because the field has been cleared, the record was created by mistake, or the block was merged with

another block. A box will appear with a list of reasons. Pick the best one or type your own.

The Location Tab

The screenshot shows a software interface with a top navigation bar containing tabs: Owner Info, Location (which is selected and highlighted in grey), Environment, Mapping, and Comment History. Below the tabs is a form area with the following fields:

- TRS: [text input field]
- Block: [text input field] with a "Map" button to its right.
- APN: [text input field]
- Block Coordinate: [text input field]
- StreetAddress: [text input field]
- City: [text input field]
- GPSLocation: [text input field]
- County/PCD: [dropdown menu]
- Type: [dropdown menu]
- Variety: [dropdown menu] with a small icon to its right.
- Tree Count: [text input field] with a checkbox labeled "Bearing" next to it.
- Acres: [text input field] with a value of "0".
- Year Planted: [text input field]
- Zip: [text input field]

Most of the items in the “Location” tab are self-explanatory. In addition to the Township/Range/Section notation that we typically use to locate Properties, we also have GPS Coordinate and Street Address fields. This gives you as much flexibility as possible for marking the location of your olive Grove.

TRS: The CCTEA uses the Township/Range/Section method of locating blocks.²

Block: Blocks are arbitrarily assigned by the CCTEA. To locate a specific block, it is necessary to use the maps on file at the CCTEA.

APN: This is the Assessor’s Parcel Number that is used to tax the trees on this grove.

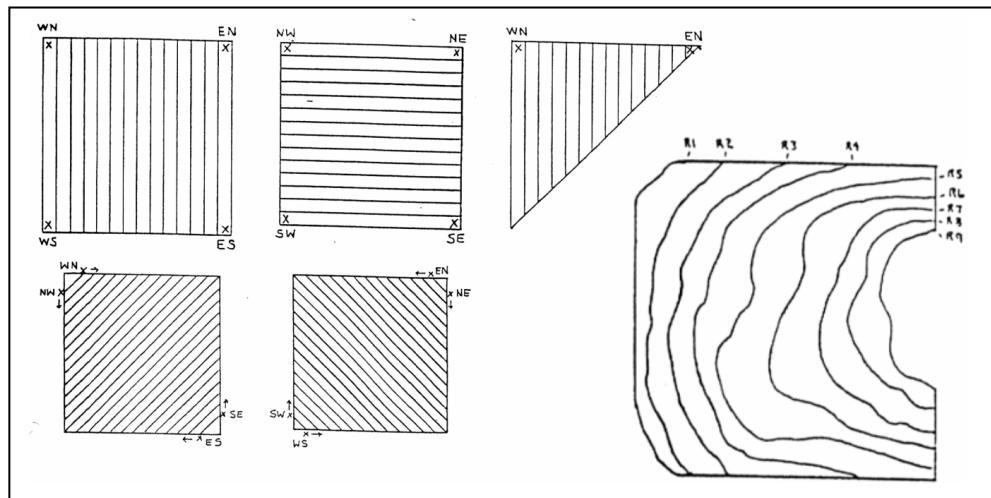
² Reference: <http://www.esg.montana.edu/gl/trs-data.html>

- **Meridian** These are similar to UTM zones. Both apply to large areas based on a line of longitude, both are often left out of field data, and the position is not uniquely defined without them! The position of the principal meridian for any area, in contrast to UTM zones, is largely historical and arbitrary. The area governed by each Meridian, also in contrast to UTM zones, is irregular in size and shape, but it frequently follows state lines.
- **Township** These occur at 6-mile intervals east and west of the principal meridian. Township values are normally whole numbers starting at 1, but some exceptions occur. Township lines are normally adjusted every 4th line to correct for the spherical nature of the earth. These are called standard parallels.
- **Range** These occur at 6-mile intervals north and south of a base line that is associated with each principal meridian. The position of the base line for each principal meridian is also historical and arbitrary. Range values are normally whole numbers starting at 1, but some exceptions occur. Range lines are normally adjusted every 4th line to correct for the spherical nature of the earth. These are called guide meridians.
- **Sections** The intersection of Range lines and Township lines define 6 by 6 mile squares called Townships, which are divided into 36 sections. These are normally 1 by 1 mile squares, but some are altered to correct for the spherical earth. Most of these departures are pushed to the northern and western tiers of sections before the next standard parallels and guide meridians. Others are altered by simple survey errors. Note that old survey errors have legal precedence over new survey results so the odd-looking lines stay put. Section numbers always range between 1 and 36. Sections are normally divided by repeated quartering, but this is beyond the scope of this program.

Block Coordinate: This is a slightly confusing term. It actually could be termed “Entry Point” or “Reference Point”. This indicates the direction the rows face in the block. This is helpful in locating a specific plant in the grove. Here are some pictures of how groves might be laid out:

The key is that the Block Coordinate is the starting point for that field. Any particular tree can be located by row number and tree down that row.

Type: This can be a commercial Grove that produces olives for sale. The trees on this lot may be exclusively olives, or



there may be olive trees mixed with other types of plants (often, olive trees are planted around citrus orchards). There are also available options for decorative trees and Residential Producing trees.

Variety: there are several varieties listed here. This is not an exhaustive list. Clicking the small button next to the Variety drop-down will allow you to add items to that list. Clicking the small button next to the variety box will allow you to add to the variety list.

Tree Count: If a Property is discovered to no longer have olive trees, set the tree count to zero (0), and then click the “Remove this block” check box (in the Owner Info tab). This indicates that the Property has been cleared, for whatever reason. Do not simply delete the record. It is important to have a positive indication that the Property was cleared, rather than to simply have a missing record with no way of determining when or why it was deleted.

The Environment tab

Info	Location	Environment	Mapping	Comment History
IrrigationType:				
Ground Cover:				
Adjacent Hosts:				
Watershed:				

The environment tab is used to record information about an olive grove. Many things can affect the spread and of pests. **Irrigation Type:** This may be flood irrigation, fanjets, or some other method of watering the trees

Ground Cover: Note extensive weeds, clover plants, or other conditions.

Adjacent Hosts: List crops or areas of native plants next to the olive block.

Watershed: List any lakes, ponds, streams, canals, or other sources of open water next to the olive block.

The Mapping Tab

The screenshot shows a tabbed interface with the 'Mapping' tab selected. The 'Description' field contains the text 'VARIED PLANTING DENSITY'. Below it are two date fields: 'Last Visit' (empty) and 'Last Mapped' (set to 1/5/2005). There are also small navigation icons (up, down, left, right) to the right of the description field.

The mapping tab contains a couple of items of interest: the last visit and last mapped fields. The last visit field should be manually updated if someone visited the site for whatever reason. This person can place their comments in the Comment History tab. The Last Mapped field is automatically updated when a map is entered that covers the Section in which this grove is located.

Comment History

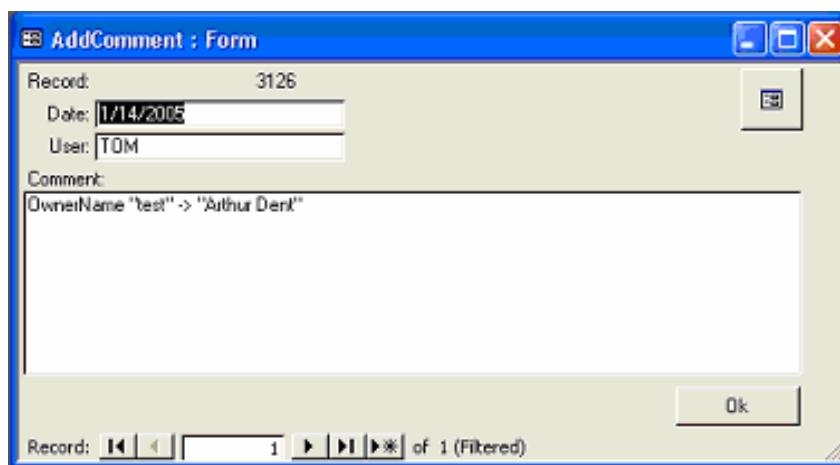
The screenshot shows a table listing changes made to the grove. The columns are Date, User, and Comment. The data shows two entries: one from 1/14/2005 by user TOM changing the owner name, and another from 1/14/2005 by user TOM changing the owner name back.

Date	User	Comment
1/14/2005	TOM	OwnerName "test" -> "Arthur Dent"
1/14/2005	TOM	OwnerName "Arthur P. Dent" -> "test"

The Comment History page allows you to see the changes that have been made to the grove. You can see a brief list of changes here, or to see more details about an individual change, click the button next to the comment.

The window that pops up will show the details of the transaction. You can follow these listings backward to see what data has been changed since revision tracking was implemented in this database (Jan 14, 2005).

Whenever you change any item in the grove window, that item will be tracked. The



contact records are not currently tracked, so changes to a mailing address or phone number will not show in this dialog.

Again, this is part of why you do not want to delete records from the grove window: when setting up a mapping project, you need to know the difference between a field that has not been mapped and one that has been mapped, but determined to no longer have any olive trees.

You can create a new free-form comment by clicking the  New button at the bottom of the window.

Changing Owner Information

In order to keep the database working properly, it is important to understand when to change owner contacts and when to create new owner contacts.

In general, we want to create a new contact when the property changes hands, and we want to edit an existing contact when the current owner changes addresses or telephone numbers.

Here is the procedure for both cases:

Owner Moves to New Address

Let's assume that Arthur Dent just moved from his old house on Orange Ave

to a new place on Fairbanks. Here is how we handle that situation:

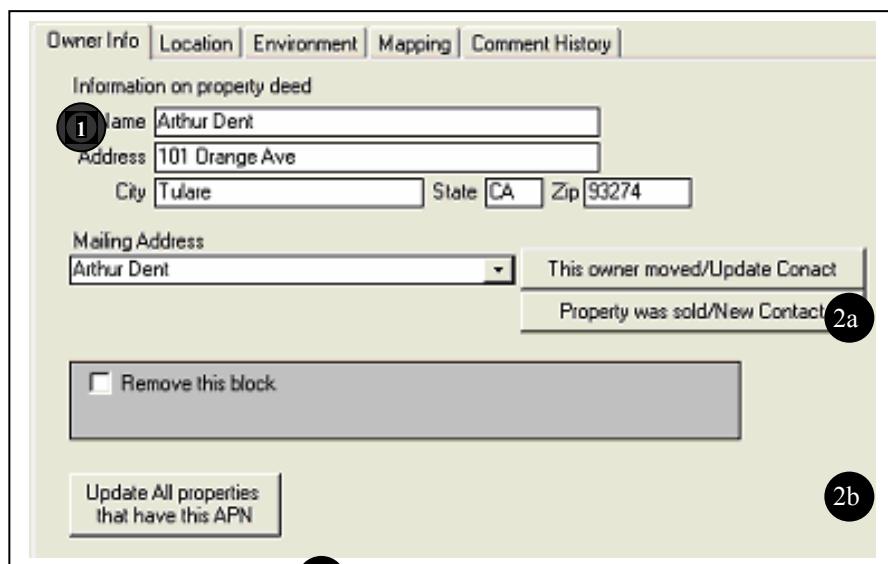
First, Edit the items in the owner info page. The picture above shows the information we will have to change.

1. Change the address to show the new information
2. Click "This owner moved/Update Contact" to enter the Contact editor.
3. When you have made the required changes to the contact, click "Save and Close" to get back to the grove window.
4. Click "Update All Properties that have this APN" to set the information in the other blocks. This will copy the name, address, city, state, and zip code. In addition, it will copy pointer to the contact that is used for the Owner mailing information.

Setting a New Owner

Setting up a new owner for a property is similar.

1. As before, fill in the new owner's information.
2. Click the "Create new owner" button to create a new contact record. (This will be pre-filled with the owner's information.)
3. Make the necessary changes and click "Save".
4. Click "Update all properties with this APN".



The screenshot shows the 'Owner Info' tab selected in a top navigation bar. Below it, there are sections for 'Information on property deed' and 'Mailing Address'. The 'Name' field contains 'Arthur Dent', 'Address' is '101 Orange Ave', 'City' is 'Tulare', 'State' is 'CA', and 'Zip' is '93274'. A dropdown menu under 'Mailing Address' also lists 'Arthur Dent'. To the right, there are two buttons: 'This owner moved/Update Contact' (circled 2a) and 'Property was sold/New Contact' (circled 2b). At the bottom left is a 'Remove this block' checkbox, and at the bottom right is a button labeled 'Update All properties that have this APN' (circled 3).

Contacts

Anatomy of a Contact Record

The Contacts section of the Olive Mapping DB allows you to store owner and manager names and addresses in a way that makes it easy to associate one owner with multiple Properties. Rather than store the owner information directly in the grove record, the owner information is stored in Contact records.

The screenshot shows a Windows-style dialog box titled "Contact : Form". It contains several input fields for contact information:

- Name: Arthur Dent
- ATTN:
- Address: 101 Orange Ave
- City: Tulare
- State: CA Zip: 93274
- Comment:
- Type: (dropdown menu)
- Home Phone: [empty]
- OfficePhone: [empty]
- MobilePhone: [empty]
- Fax: [empty]
- EMail: [empty]
- Reference: [empty]

At the bottom are three buttons: "Get From Deed", "Save", and "Cancel".

A contact contains all the basic information about a person associated with a grove. This can be the owner of the property, the manager, or another miscellaneous contact (a caretaker, for example). Contacts can be assigned to a grove by pulling down the selection list in the property window. They can be edited with the **Edit Contact** button, and a new contact can be created with the **New Contact** Button.

All of the contacts are edited in the same fashion. When you are changing from one person to another, you select from the list or you use the New Contact button. When a person has simply moved or changed their phone number, use the Edit button. (If this is done incorrectly, it is possible to accidentally assign the wrong name to the owner or manager of a piece of property.)

Get From Deed: When editing a contact, you can choose to grab the address and name from the property deed information on the property you are currently editing.

Type: Select the role this person fills. Is this person a property owner? Is this person a manager? This box does not actually affect the operation of the program, but is there for your convenience and for reporting purposes.

Save will save this record and close the form

Cancel will close the form without saving the changes to this record.

Mapping

The mapping form allows you to enter data about a physical mapping activity. A single map is created for each municipal section (see reference below). A map may contain information about more than one olive grove, so the maps are only identified by township, range, and section (this is abbreviated as TRS). To determine

The screenshot shows a Windows-style dialog box titled "Maps : Form". It contains the following fields:

- DATE: 1/10/2005
- NAME: julie (dropdown menu)
- TRS: 22/27/10
- Map (button)
- Comments: (large text area)

On the right side, there are three radio buttons:

- NEW
- REVISED
- Redrawn

At the bottom, there are icons for Print and Save. The footer shows "Record: 27 of 27".

which olive groves are covered by a particular map, it is necessary to look at the TRS for that olive grove.

Date is the date the property was physically surveyed.

Name is the name of the person creating the map.

TRS is the Township/Range/Section identifier for the map. If TRS is not available, other identifiers could be used to indicate the location that was surveyed. In this event, the data needs to match the contents of the TRS box on all the properties that the map covers.

Redrawn indicates that you have re-drawn the map on a fresh piece of paper.

New and **Revised** Indicate whether the map is new. A revised map will have a revision number (this revision number is not stored in the database).

Map will be enabled if there is a map image on the network for this section. If the button is enabled (not grayed out), clicking it will display the map image for this section.