GIS on a Budget: Simple Applications for the Real World Solutions

10th Annual LEA / CIWMB Conference October 2007

Scot Johnson

Butte County Public Works

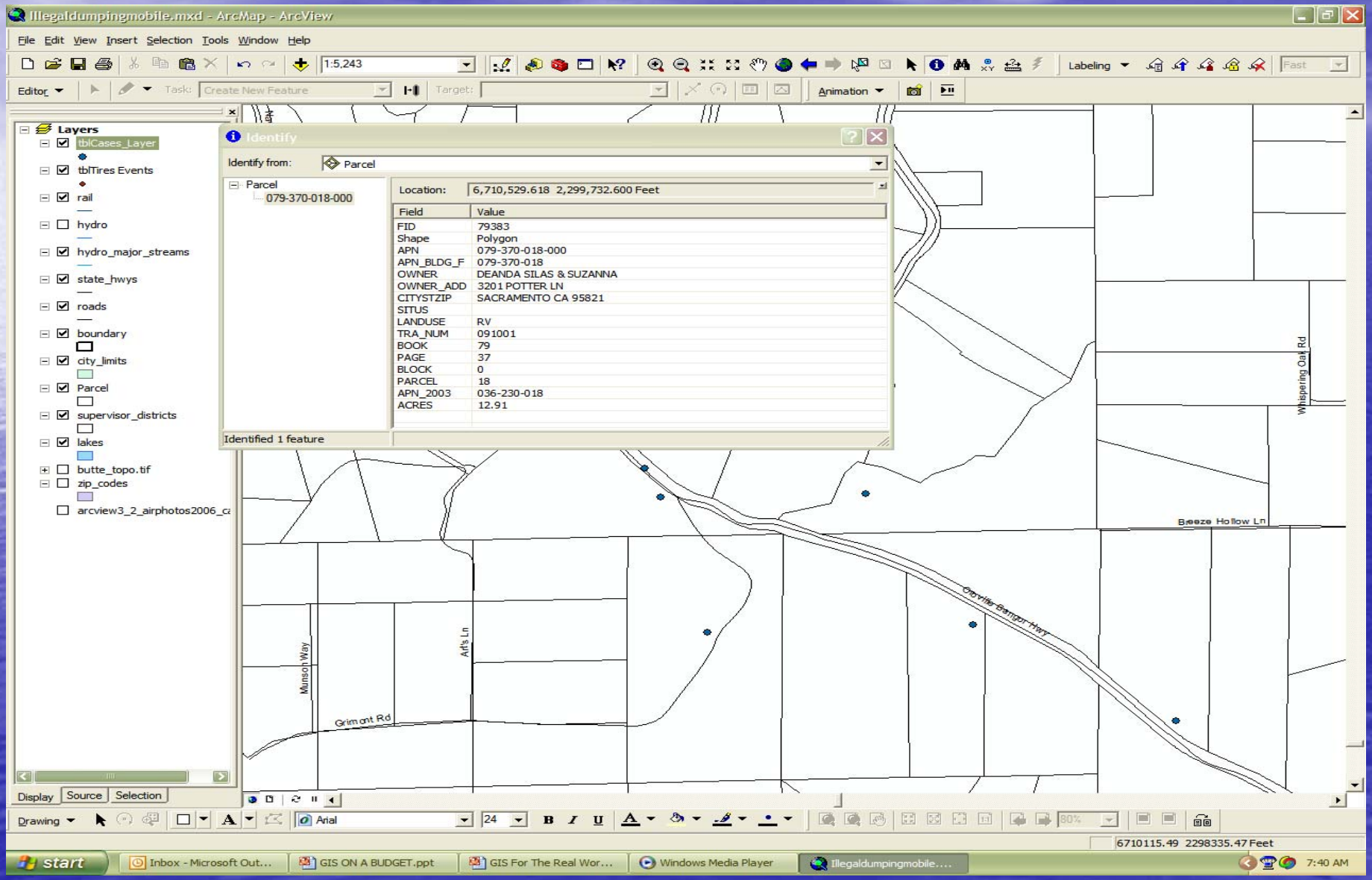
Solid Waste Code Enforcement Officer

FIELD APPLICATIONS

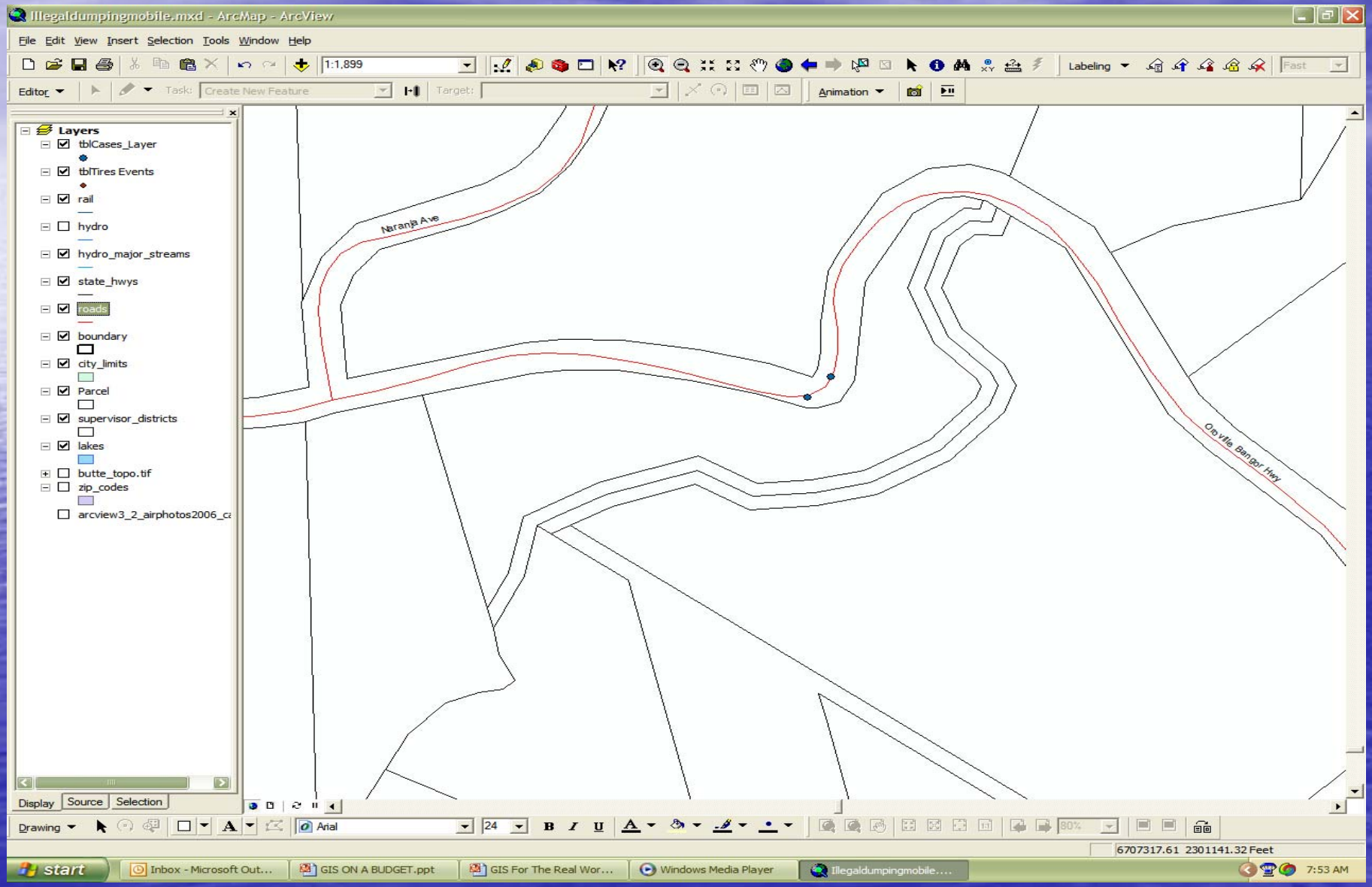
- Information At Your Finger Tips
  - Who owns this parcel ?
  - Should I be worried ?
  - Is this site in the Right-of-Way ?
  - Have I been here before ?
  - What Road District am I in ?
  - Any layer you have on your GIS program can be used in the field with some limitations.

K-9 UNIT - STAY BACK
SHERIFF
1103547
1128

Parcel Information



Right-of-Way


Illegaldumpingmobile.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
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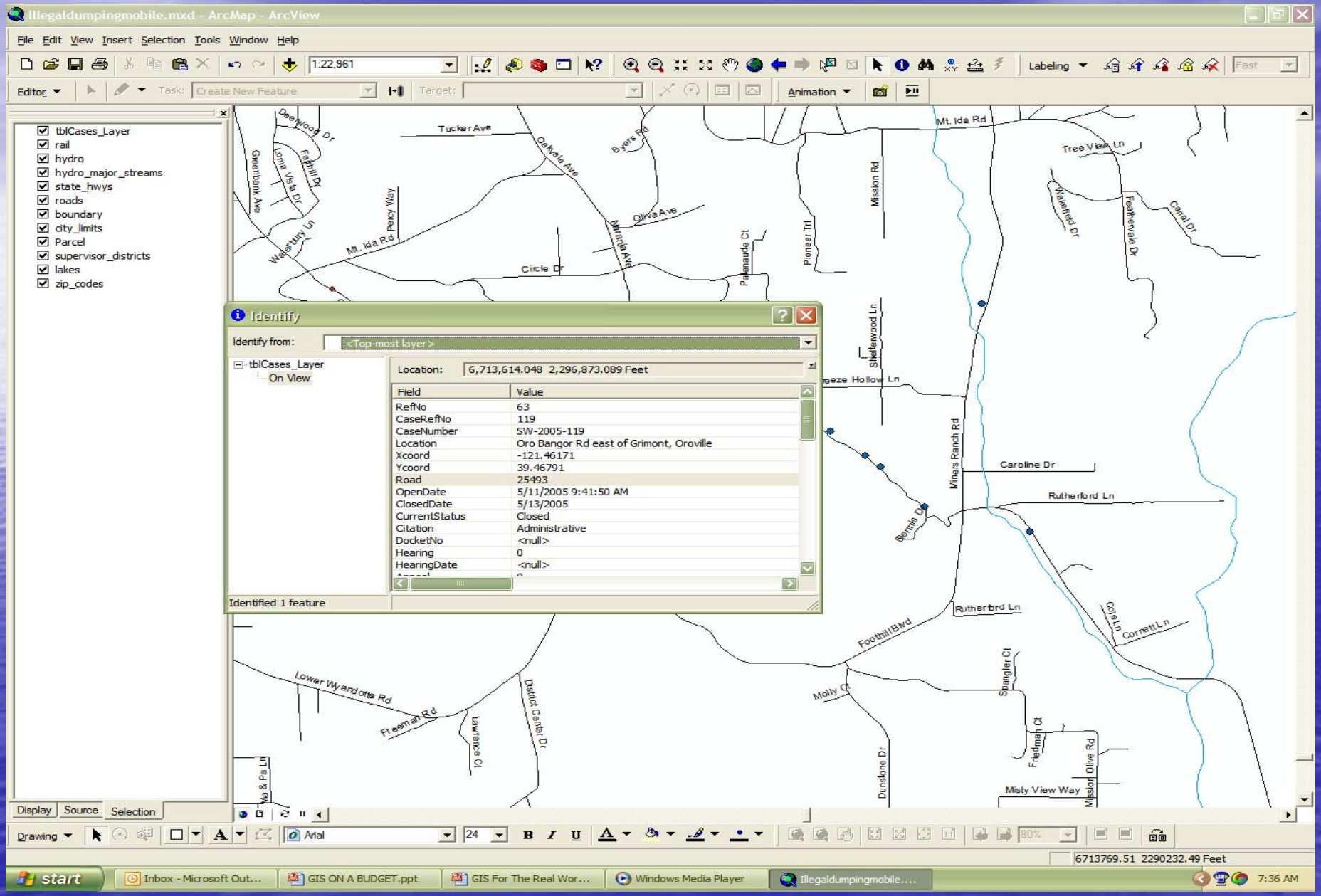
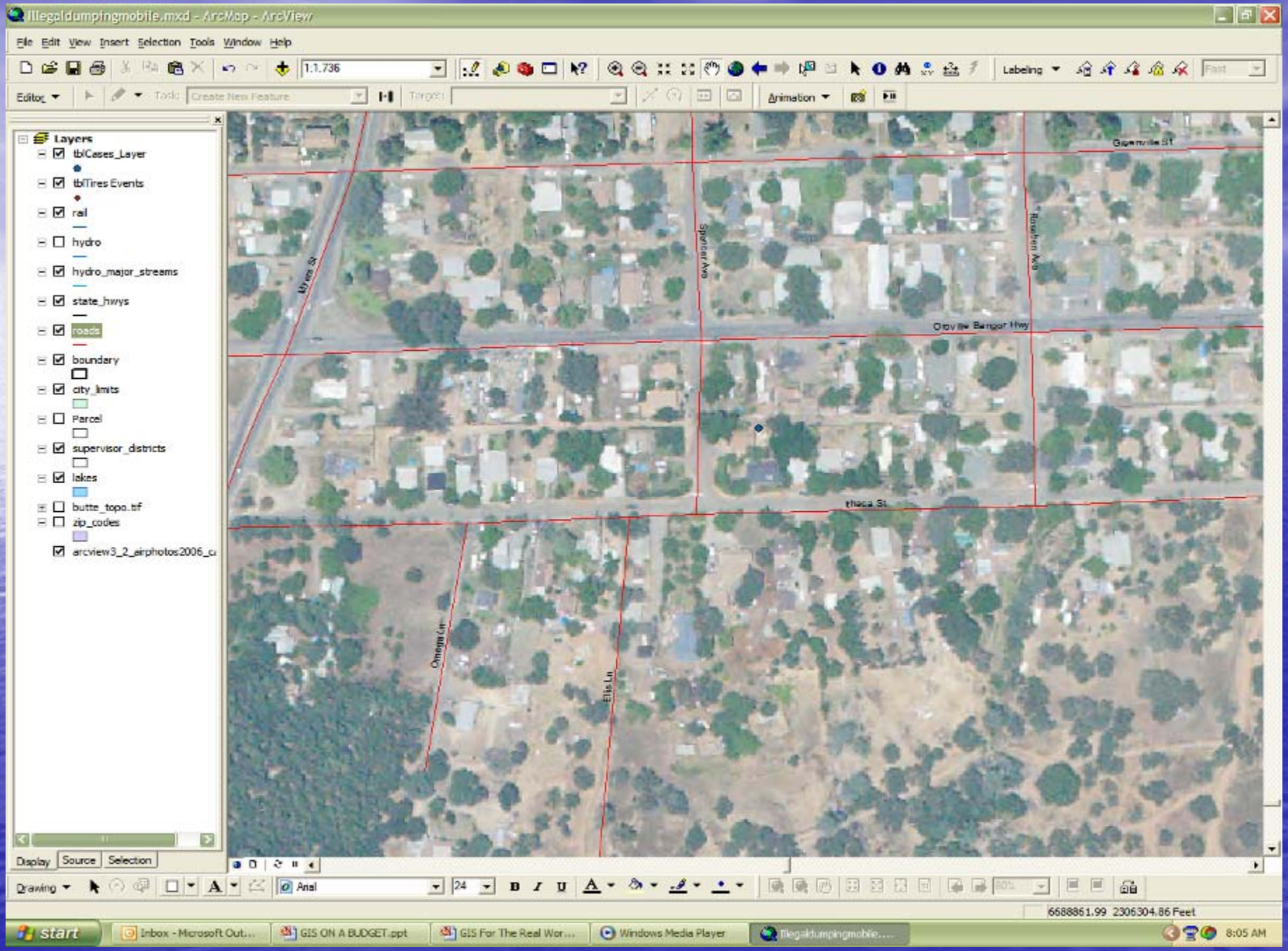
Editor
Task: Create New Feature
Target:
Animation
Labeling
Layers
tblCases_Layer
tblTires Events
rail
hydro
hydro_major_streams
state_hwys
roads
boundary
city_limits
Parcel
supervisor_districts
lakes
butte_topo.tif
zip_codes
arcview3_2_airphotos2006_c
Naranja Ave
Oroville Bangor Hwy
Display Source Selection
Drawing
Arial
24
6707317.61 2301141.32 Feet
start
Inbox - Microsoft Out...
GIS ON A BUDGET.ppt
GIS For The Real Wor...
Windows Media Player
Illegaldumpingmobile....
7:53 AM

Have I been here before ?




illegaldumpingmobile.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Layers
tblCases_Layer
tblTires Events
rail
hydro
hydro_major_streams
state_hwys
roads
boundary
city_limits
Parcel
supervisor_districts
lakes
butte_topo.tif
zip_codes
Display Source Selection
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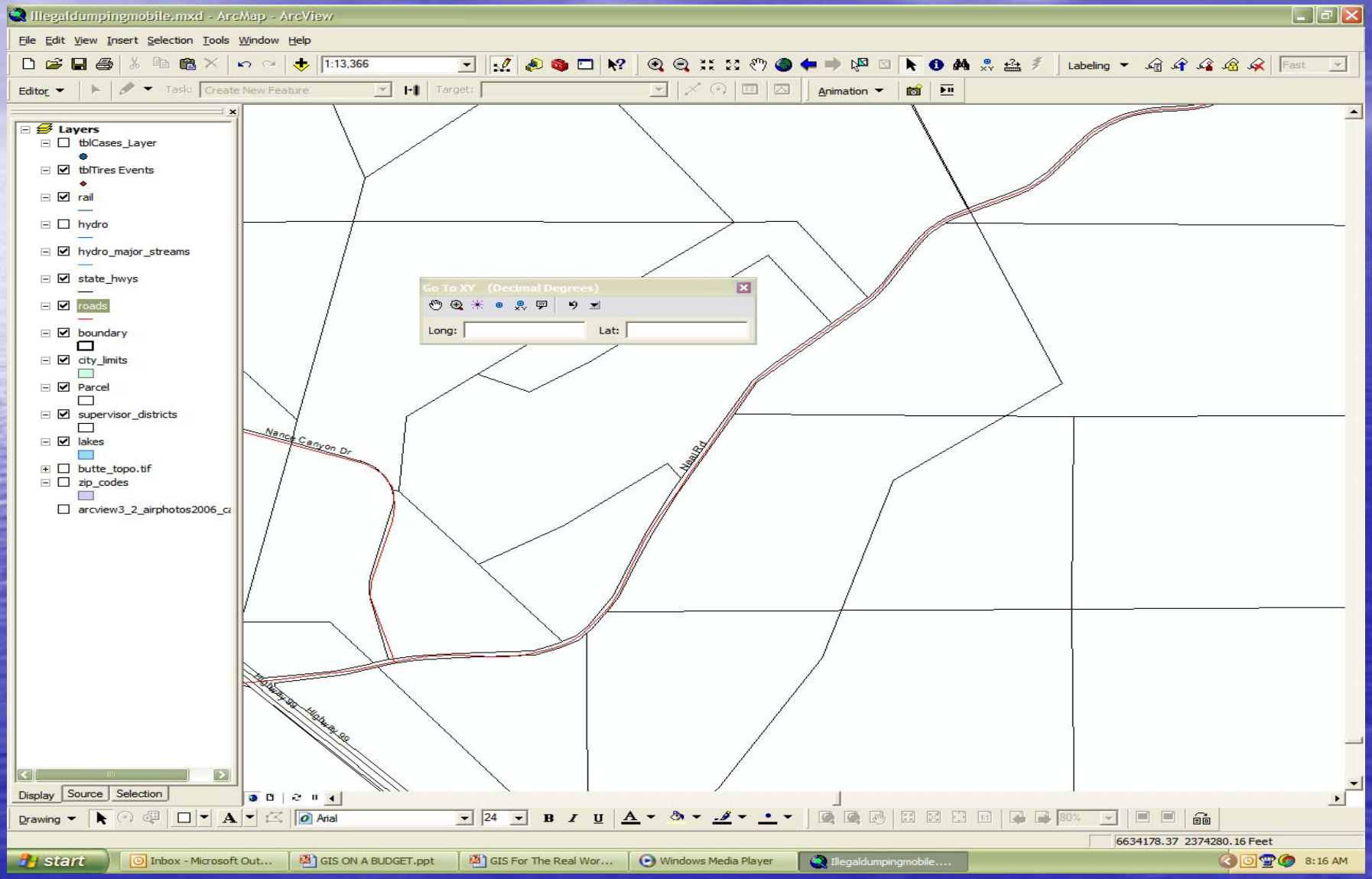
Arial
6688861.99 2306304.86 Feet
start
Inbox - Microsoft Out...
GIS ON A BUDGET.ppt
GIS For The Real Wor...
Windows Media Player
illegaldumpingmobile....
8:05 AM

Adding GPS Points

- ArcGIS 9 created a tool to add X and Y coordinates (the black spot) to your map
- This helps for quick reference in the field
  - Were am I ?
  - What parcel am I on ?
  - Etc.

Step 1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Labeling
Layers
tblCases_Layer
tblTires Events
rail
hydro
hydro_major_streams
state_hwys
roads
boundary
city_limits
Parcel
supervisor_districts
lakes
butte_topo.tif
zip_codes
arcview3_2_airphotos2006_c
Go To XY (Decimal Degrees)
Long:
Lat:
Nance Canyon Dr
Neal Rd
Highway 99
Display
Source
Selection
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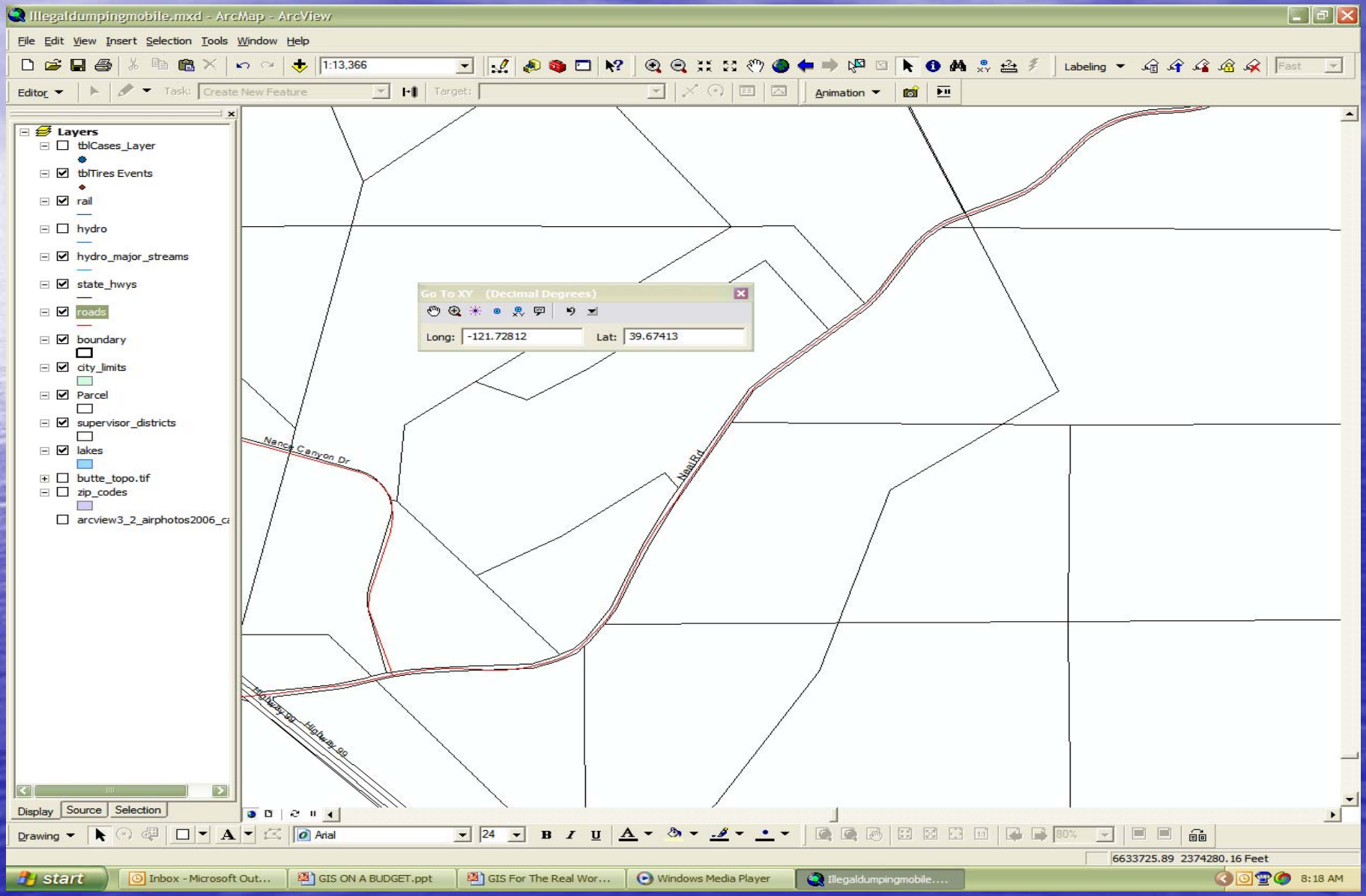
Arial
24
6634178.37 2374280.16 Feet
start
Inbox - Microsoft Out...
GIS ON A BUDGET.ppt
GIS For The Real Wor...
Windows Media Player
Illegaldumpingmobile....
8:16 AM

Step 2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Editor
Task: Create New Feature
Target:
Animation
Labeling
Layers
tblCases_Layer
tblTires Events
rail
hydro
hydro_major_streams
state_hwys
roads
boundary
city_limits
Parcel
supervisor_districts
lakes
butte_topo.tif
zip_codes
arcview3_2_airphotos2006_ca
Go To XY (Decimal Degrees)
Long: -121.72812
Lat: 39.67413
Nance Canyon Dr
Display Source Selection
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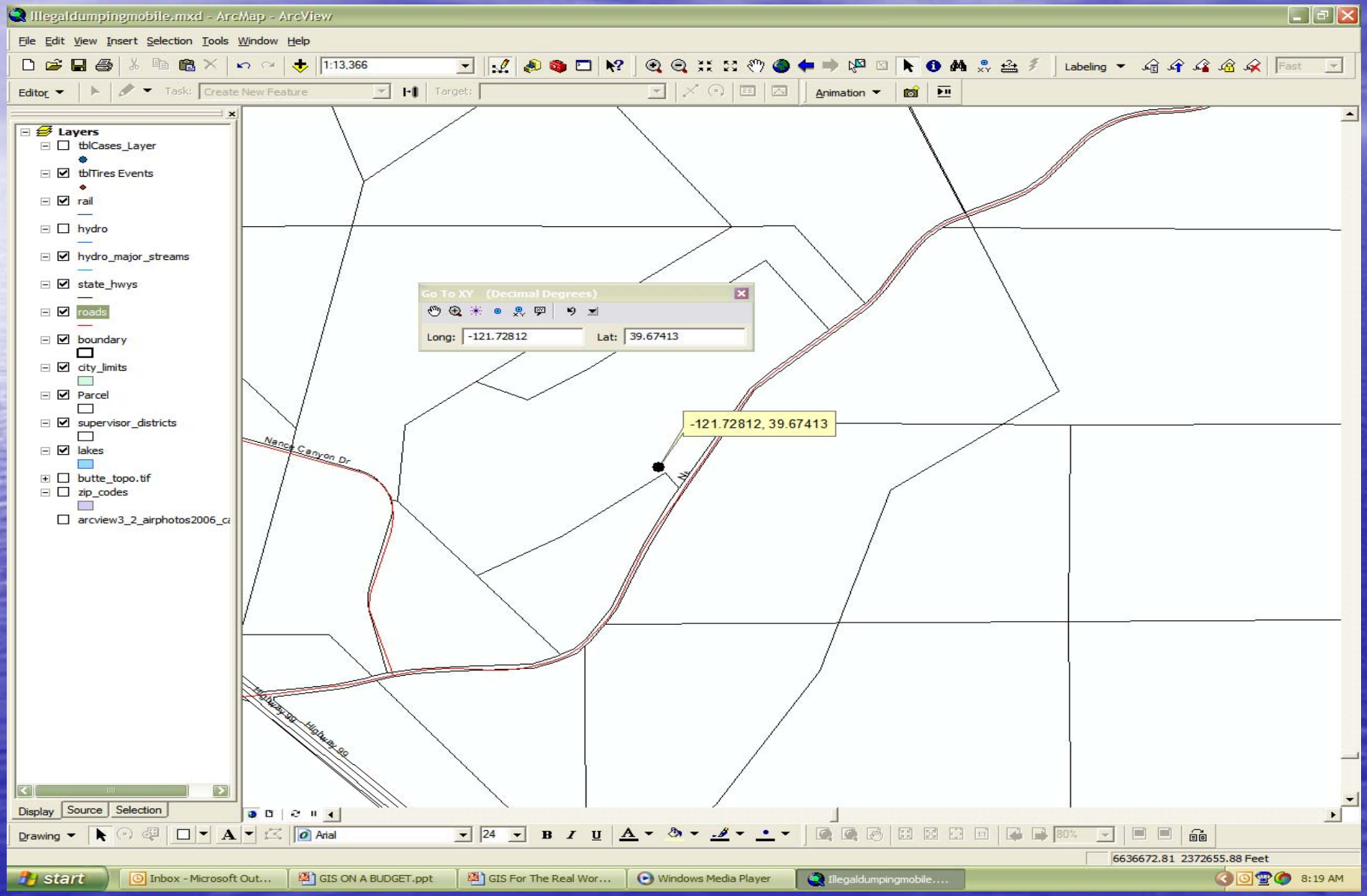
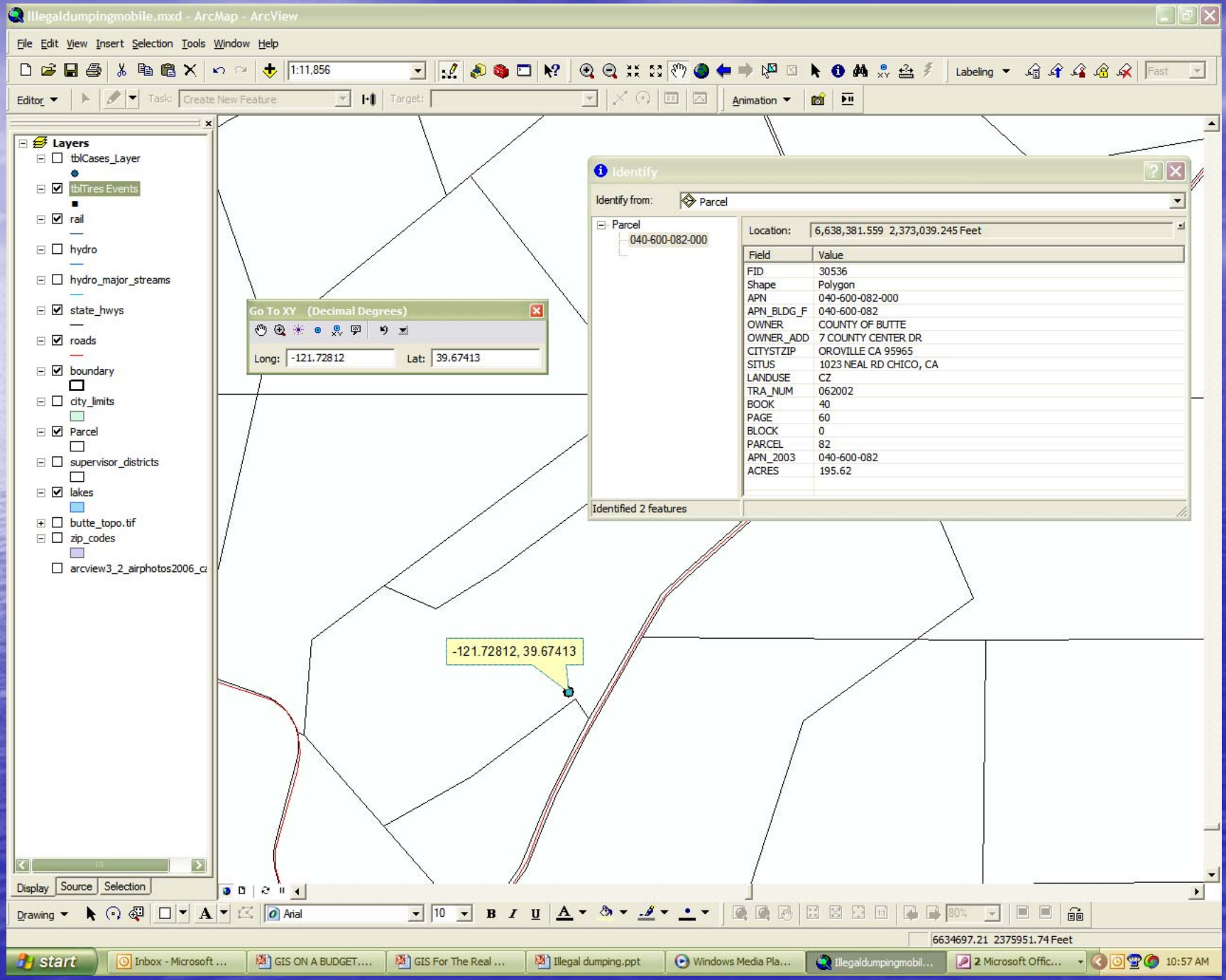
6633725.89 2374280.16 Feet
start
Inbox - Microsoft Out...
GIS ON A BUDGET.ppt
GIS For The Real Wor...
Windows Media Player
Illegaldumpingmobile....
8:18 AM

Step 3 and Your Done

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Labeling
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Layers
tblCases_Layer
tblTires Events
rail
hydro
hydro_major_streams
state_hwys
roads
boundary
city_limits
Parcel
supervisor_districts
lakes
butte_topo.tif
zip_codes
arcview3_2_airphotos2006_ca
Display
Source
Selection
Go To XY (Decimal Degrees)
Long: -121.72812
Lat: 39.67413
Identify
Identify from: Parcel
Parcel
040-600-082-000
Location: 6,638,381.559 2,373,039.245 Feet
Field
Value
FID 30536
Shape Polygon
APN 040-600-082-000
APN_BLDG_F 040-600-082
OWNER COUNTY OF BUTTE
OWNER_ADD 7 COUNTY CENTER DR
CITYSTZIP OROVILLE CA 95965
SITUS 1023 NEAL RD CHICO, CA
LANDUSE CZ
TRA_NUM 062002
BOOK 40
PAGE 60
BLOCK 0
PARCEL 82
APN_2003 040-600-082
ACRES 195.62
Identified 2 features
-121.72812, 39.67413
Drawing
Arial
10
6634697.21 2375951.74 Feet
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Illegal dumping.ppt
Windows Media Pla...
Illegaldumpingmobil...
2 Microsoft Offic...
10:57 AM

Testing "Roadside Camouflage"

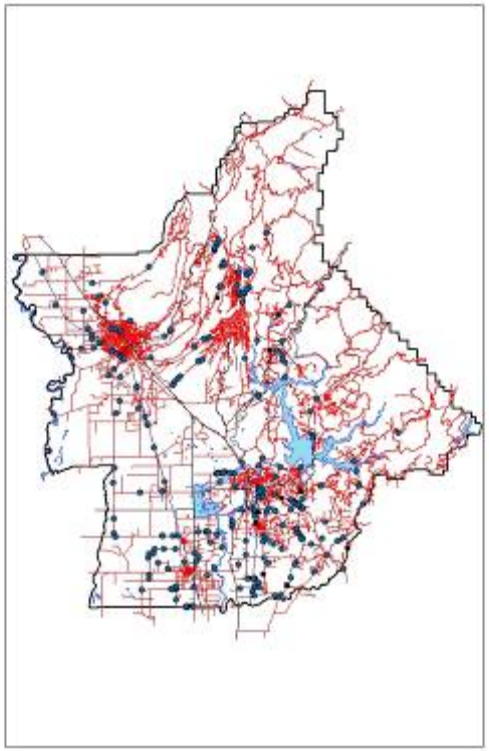
Trend Setting

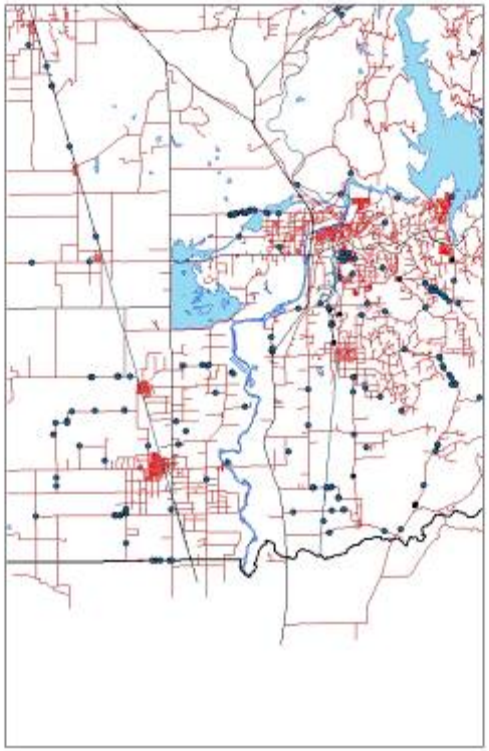
- Developing a map to show your "HOT SPOTS"
  - Do we need more signs ?
  - Maybe more surveillance ?
  - Change to County Ordinance ?

Actions

- New Signs Placed in “HOT SOPTS”
- Education for Community Groups
- Education for Law Enforcement
- Change to County Solid Waste Ordinance

County “HOT SPOTS”





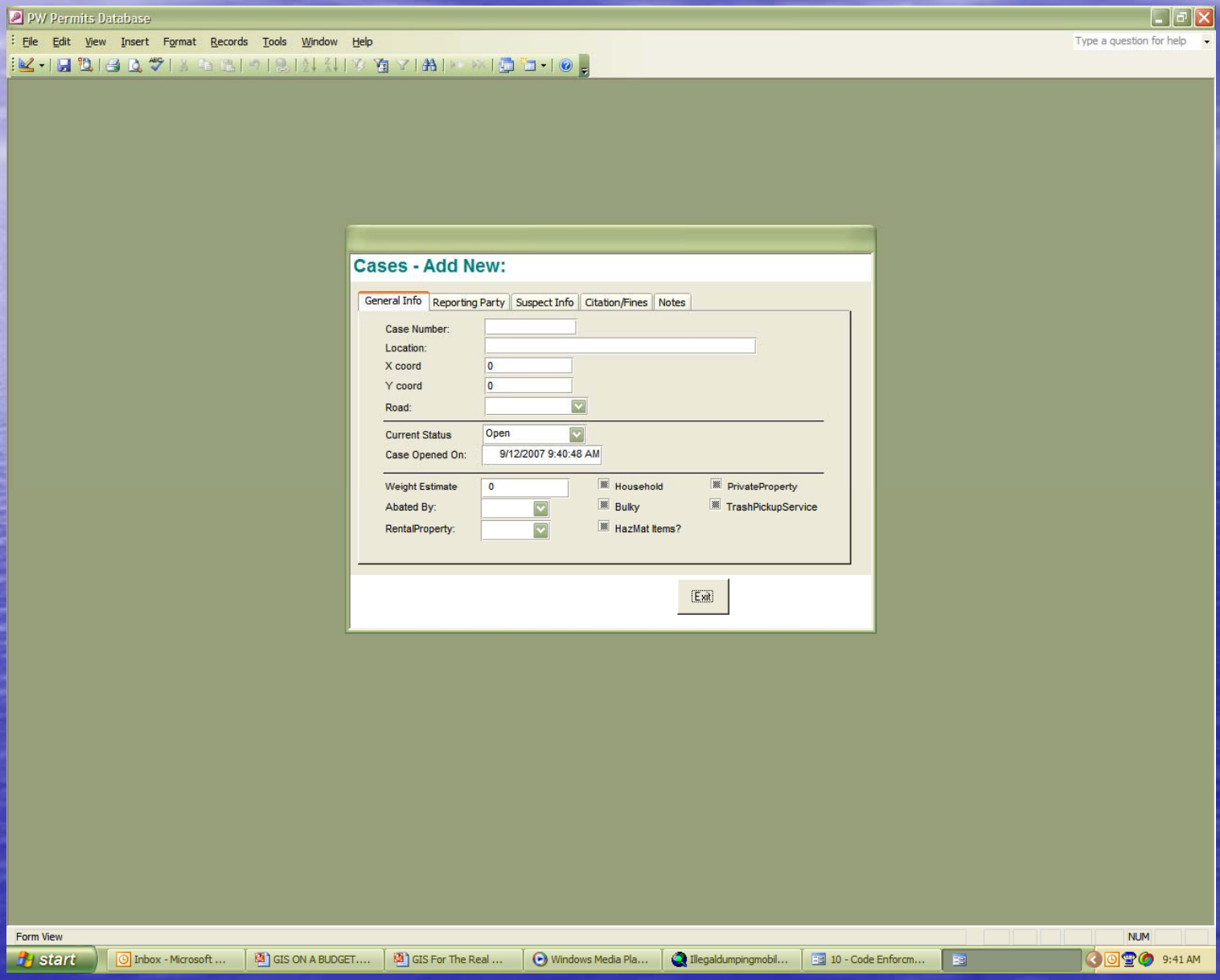
How It All Works

- Start with a Database
  - Include all the information you need
  - Don’t forget your X Y coordinates

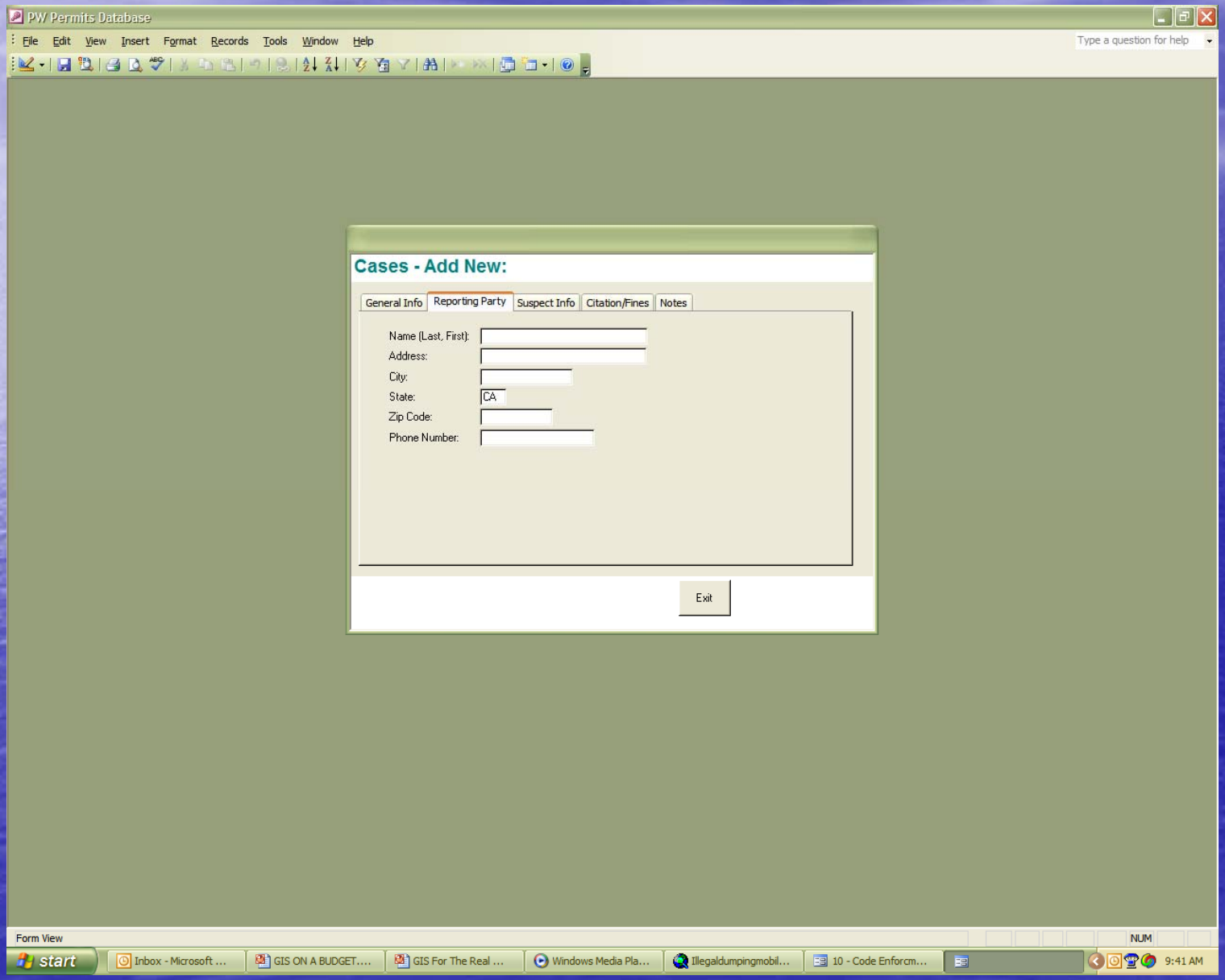
Database

PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Public Works - Investigations
DEPARTMENT OF BUTTE COUNTY PUBLIC WORKS
Public Works Code Enforcement
Current User: SJohnson
Level: Administrator
1 - Code Enforcement...
2 - View Code Enforcement Files
3 - Community Cleanup
4 - Tire Dump Sites...
5 - Adopt A Highway...
6 - Reports...
7 - Utilities and Preferences
8 - Exit Program
Form View
FLTR
NUM
start
Inbox - Microsoft Out...
GIS ON A BUDGET.ppt
GIS For The Real Wor...
Windows Media Player
Illegaldumpingmobile....
PW Permits Database
9:38 AM

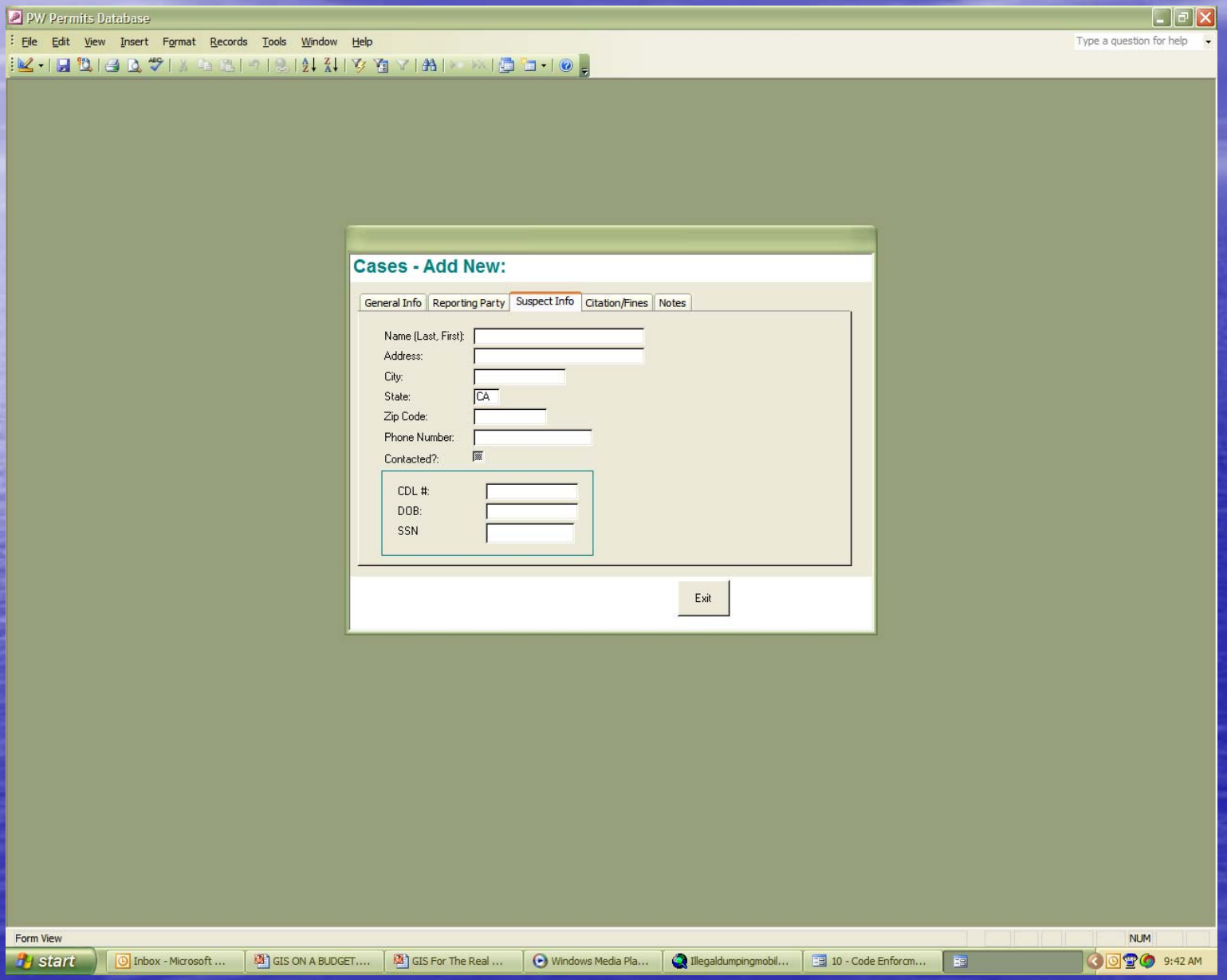
Database


PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Cases - Add New:
General Info
Reporting Party
Suspect Info
Citation/Fines
Notes
Case Number:
Location:
X coord
0
Y coord
0
Road:
Current Status
Open
Case Opened On:
9/12/2007 9:40:48 AM
Weight Estimate
0
Abated By:
RentalProperty:
Household
Bulky
HazMat Items?
PrivateProperty
TrashPickupService
Exit
Form View
NUM
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Windows Media Pla...
Illegaldumpingmobil...
10 - Code Enforcm...
9:41 AM

Database


PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Cases - Add New:
General Info
Reporting Party
Suspect Info
Citation/Fines
Notes
Name (Last, First):
Address:
City:
State:
CA
Zip Code:
Phone Number:
Exit
Form View
NUM
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Windows Media Pla...
Illegaldumpingmobil...
10 - Code Enforcm...
9:41 AM

Database


PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Cases - Add New:
General Info
Reporting Party
Suspect Info
Citation/Fines
Notes
Name (Last, First):
Address:
City:
State:
CA
Zip Code:
Phone Number:
Contacted?:
CDL #:
DOB:
SSN
Exit
Form View
NUM
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Windows Media Pla...
Illegaldumpingmobil...
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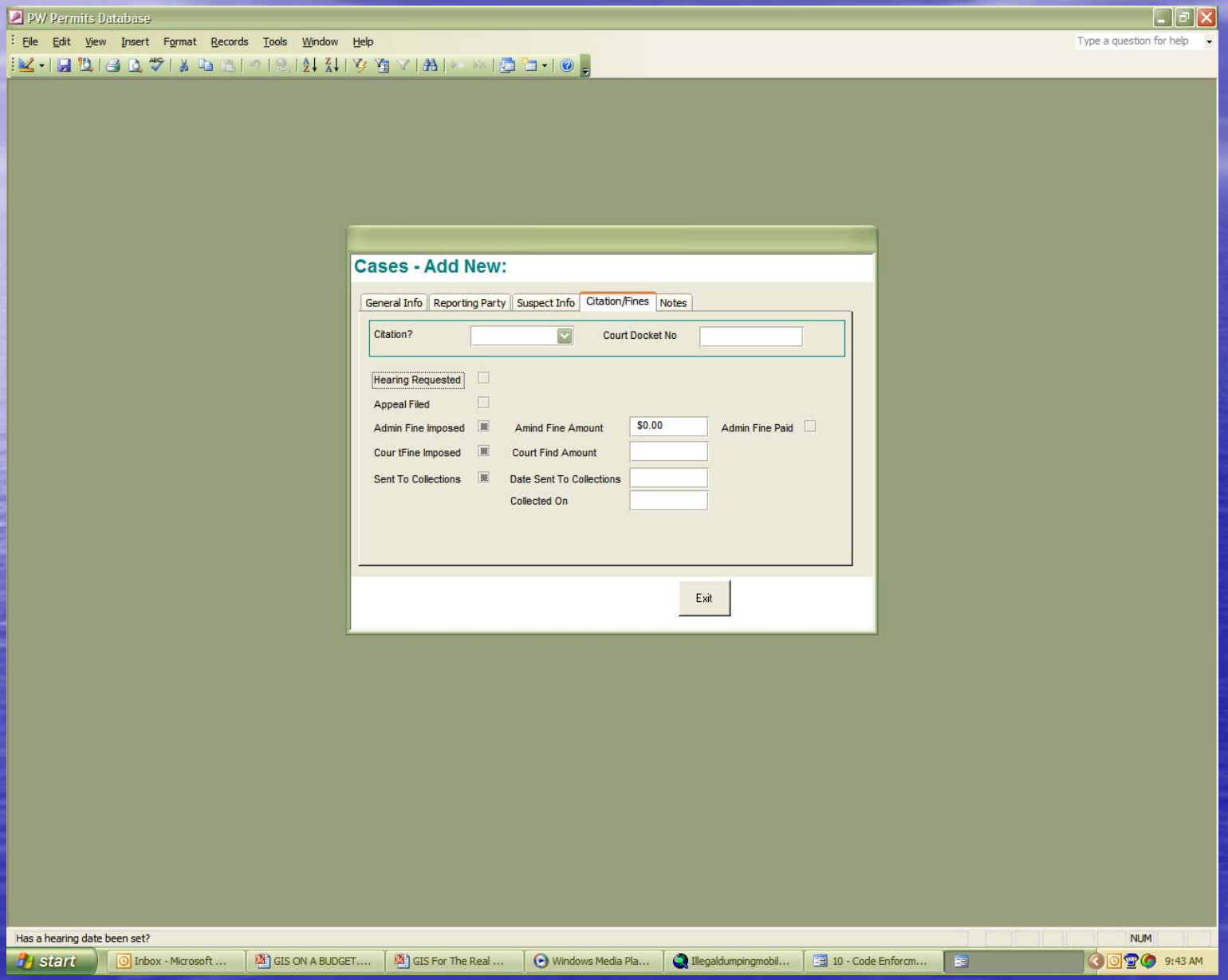
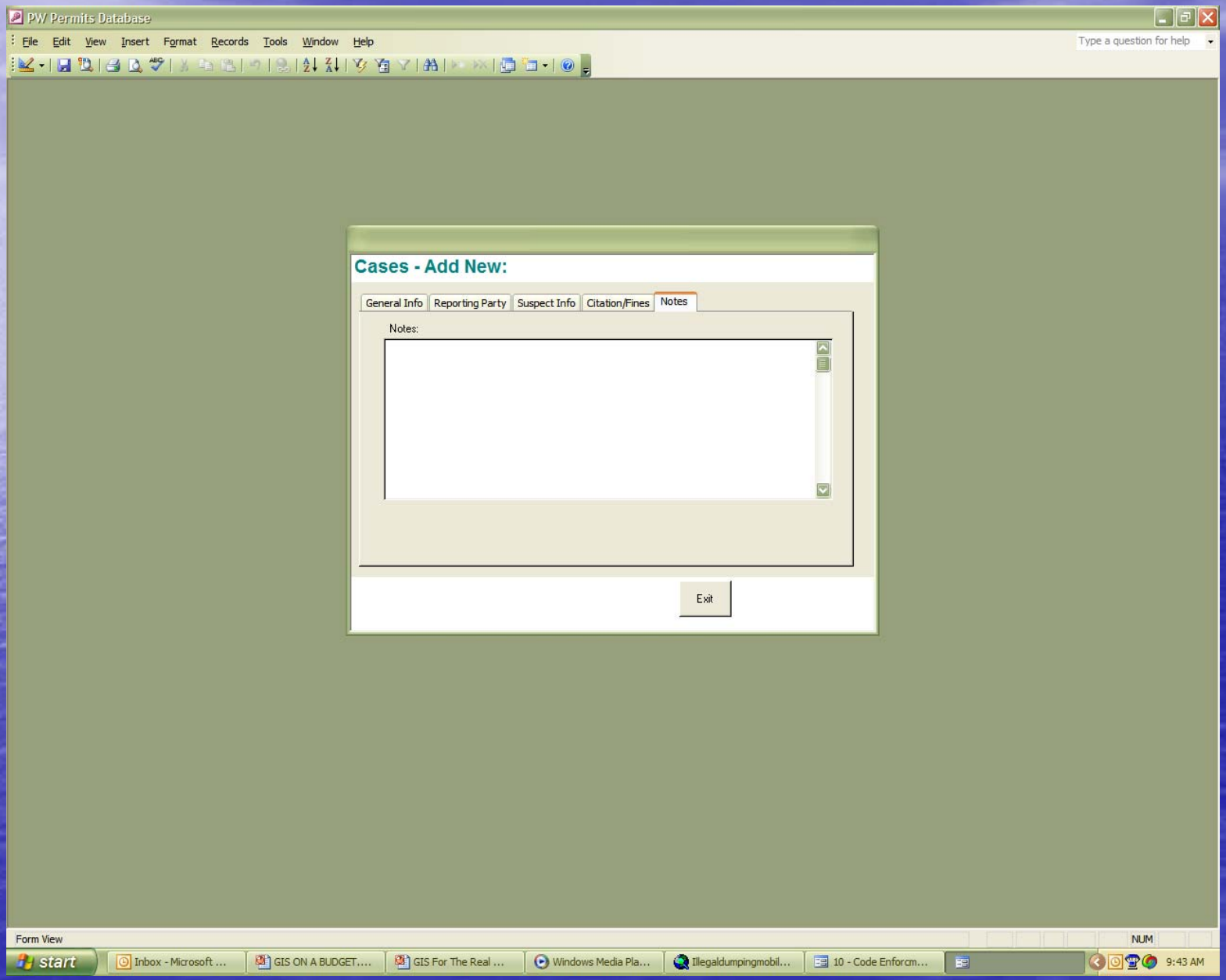
9:42 AM

Database


PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Cases - Add New:
General Info
Reporting Party
Suspect Info
Citation/Fines
Notes
Citation?
Court Docket No
Hearing Requested
Appeal Filed
Admin Fine Imposed
Amind Fine Amount
$0.00
Admin Fine Paid
Cour tFine Imposed
Court Find Amount
Sent To Collections
Date Sent To Collections
Collected On
Exit
Has a hearing date been set?
NUM
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Windows Media Pla...
Illegaldumpingmobil...
10 - Code Enforcm...
9:43 AM

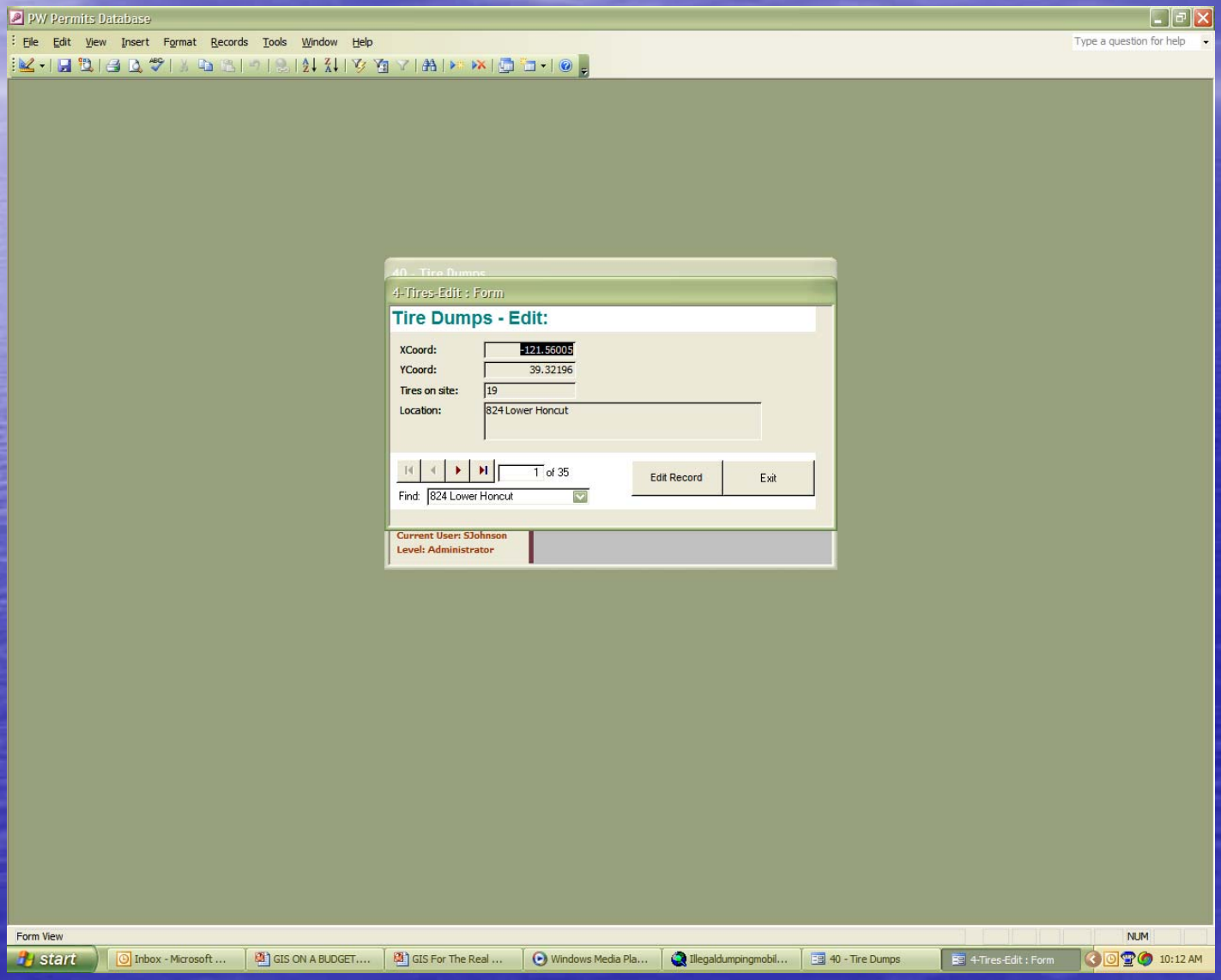
Database


PW Permits Database
File Edit View Insert Format Records Tools Window Help
Type a question for help
Cases - Add New:
General Info
Reporting Party
Suspect Info
Citation/Fines
Notes
Notes:
Exit
Form View
NUM
start
Inbox - Microsoft ...
GIS ON A BUDGET....
GIS For The Real ...
Windows Media Pla...
Illegaldumpingmobil...
10 - Code Enforcm...
9:43 AM

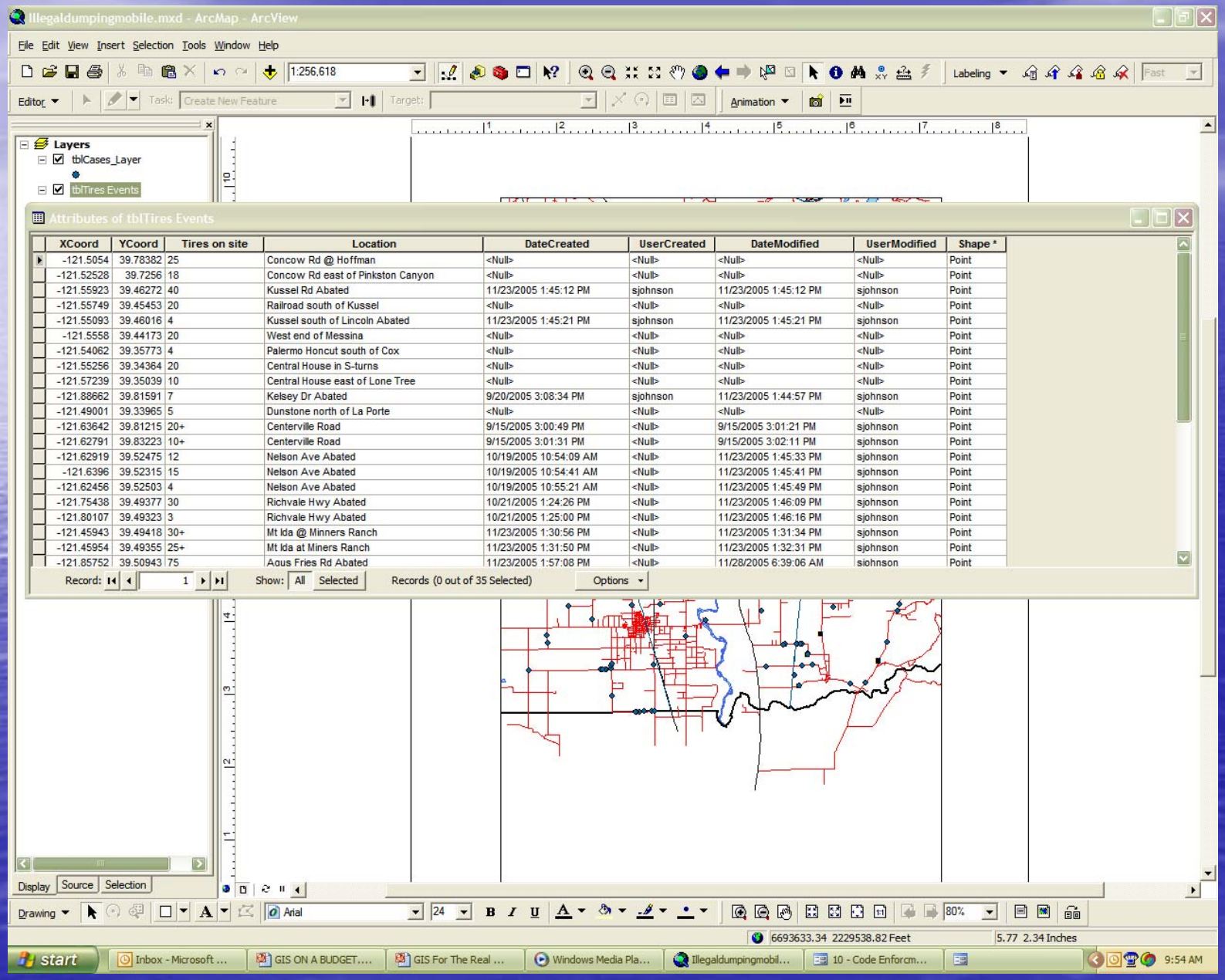
The Link from Database to GIS

- GIS will use the tables created in your Database for GIS layer information

Database Input



Database Table In GIS



XCoord	YCoord	Tires on site	Location	DateCreated	UserCreated	DateModified	UserModified	Shape *
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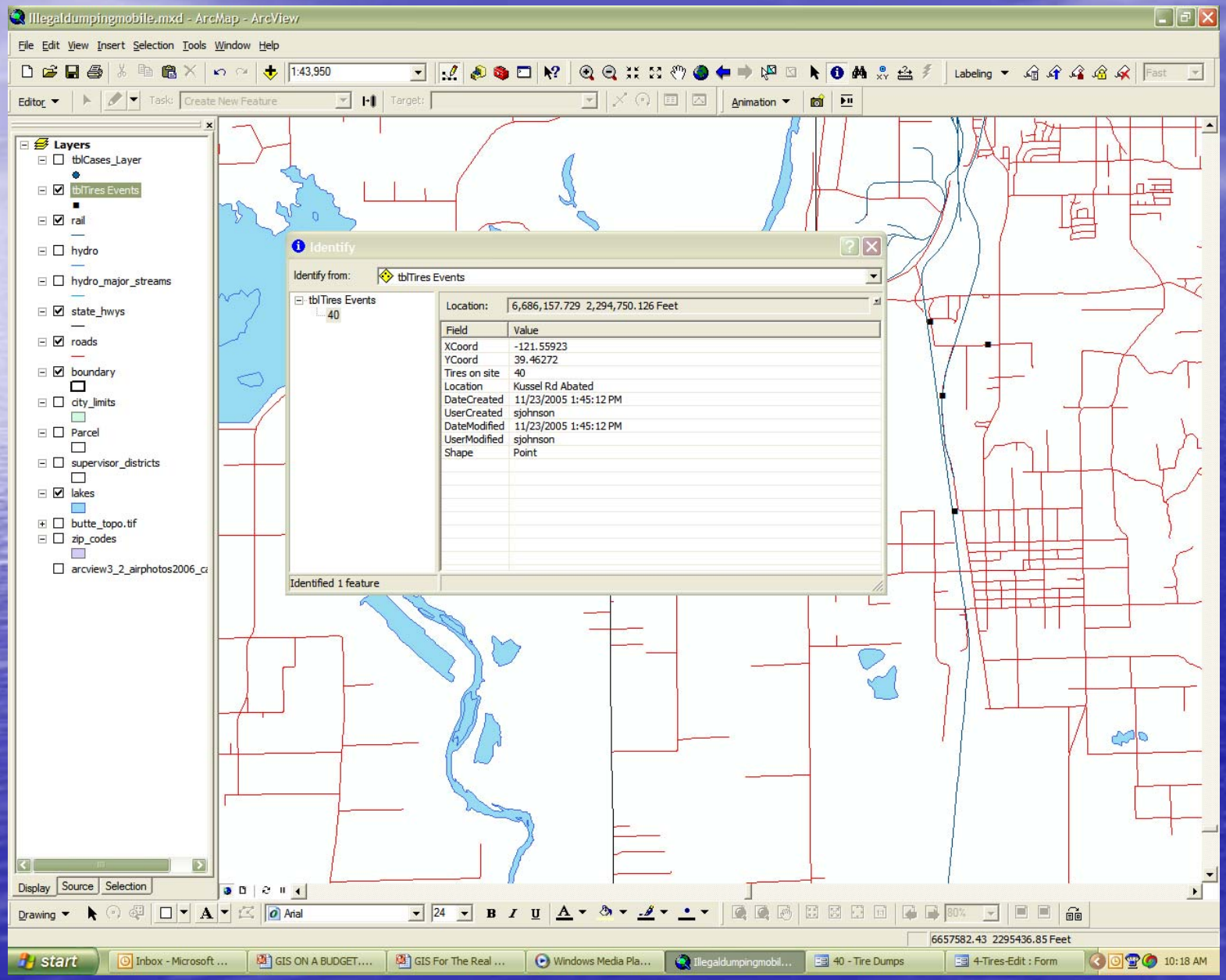
-121.52528	39.7256	18	Concow Rd east of Pinkston Canyon	<Null>	<Null>	<Null>	<Null>	Point
-121.55923	39.46272	40	Kussel Rd Abated	11/23/2005 1:45:12 PM	sjohnson	11/23/2005 1:45:12 PM	sjohnson	Point
-121.55749	39.45453	20	Railroad south of Kussel	<Null>	<Null>	<Null>	<Null>	Point
-121.55093	39.46016	4	Kussel south of Lincoln Abated	11/23/2005 1:45:21 PM	sjohnson	11/23/2005 1:45:21 PM	sjohnson	Point
-121.5558	39.44173	20	West end of Messina	<Null>	<Null>	<Null>	<Null>	Point
-121.54062	39.35773	4	Palermo Honcut south of Cox	<Null>	<Null>	<Null>	<Null>	Point
-121.55256	39.34364	20	Central House in S-turns	<Null>	<Null>	<Null>	<Null>	Point
-121.57239	39.35039	10	Central House east of Lone Tree	<Null>	<Null>	<Null>	<Null>	Point
-121.88662	39.81591	7	Kelsey Dr Abated	9/20/2005 3:08:34 PM	sjohnson	11/23/2005 1:44:57 PM	sjohnson	Point
-121.49001	39.33965	5	Dunstone north of La Porte	<Null>	<Null>	<Null>	<Null>	Point
-121.63642	39.81215	20+	Centerville Road	9/15/2005 3:00:49 PM	<Null>	9/15/2005 3:01:21 PM	sjohnson	Point
-121.62791	39.83223	10+	Centerville Road	9/15/2005 3:01:31 PM	<Null>	9/15/2005 3:02:11 PM	sjohnson	Point
-121.62919	39.52475	12	Nelson Ave Abated	10/19/2005 10:54:09 AM	<Null>	11/23/2005 1:45:33 PM	sjohnson	Point
-121.6396	39.52315	15	Nelson Ave Abated	10/19/2005 10:54:41 AM	<Null>	11/23/2005 1:45:41 PM	sjohnson	Point
-121.62456	39.52503	4	Nelson Ave Abated	10/19/2005 10:55:21 AM	<Null>	11/23/2005 1:45:49 PM	sjohnson	Point
-121.75438	39.49377	30	Richvale Hwy Abated	10/21/2005 1:24:26 PM	<Null>	11/23/2005 1:46:09 PM	sjohnson	Point
-121.80107	39.49323	3	Richvale Hwy Abated	10/21/2005 1:25:00 PM	<Null>	11/23/2005 1:46:16 PM	sjohnson	Point
-121.45943	39.49418	30+	Mt Ida @ Minners Ranch	11/23/2005 1:30:56 PM	<Null>	11/23/2005 1:31:34 PM	sjohnson	Point
-121.45954	39.49355	25+	Mt Ida at Miners Ranch	11/23/2005 1:31:50 PM	<Null>	11/23/2005 1:32:31 PM	sjohnson	Point
-121.85752	39.50943	75	Aqus Fries Rd Abated	11/23/2005 1:57:08 PM	<Null>	11/28/2005 6:39:06 AM	sjohnson	Point

GIS Information On Site



Any Questions?

Thank You