



Esri Forestry GIS Solutions Conference

Hosted by the Esri Forestry Group | May 1–3, 2012

Using GIS in Private-Land Forest Restoration

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Forest Care

A partnership

- California Department of Forestry & Fire Protection
- San Bernardino National Forest Association
- United States Forest Service



Reaching into the local communities

- Local Fire Safe Councils
- Local Fire Districts
- County Fire
- Chamber of Commerce
- Environmental Groups
- Homeowners' Associations



A topographic map showing green and yellow contour lines, with a small '500' elevation marker visible.

The Program

- Grant funded cost-share for small residential forest landowners.
75% Reimbursement
- Private lands in and around the San Bernardino National Forest -
roughly 80,000 parcels!
- Thinning small-diameter (<12") green trees to reduce hazardous
fuels and increase forest health



Yellow is
USFS Land

Red is
Private Land

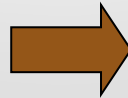


Forest Care

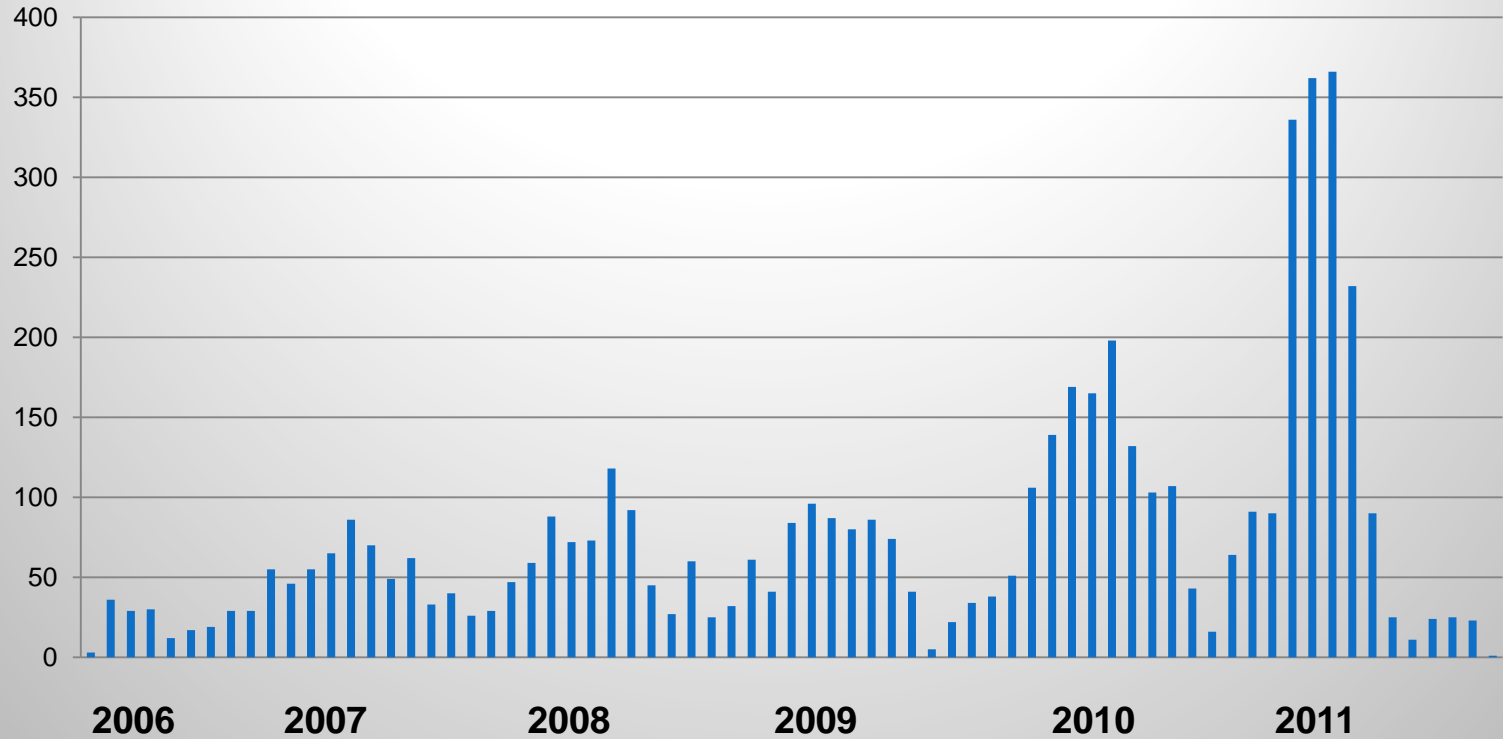
- Long-term educational endeavor to encourage landowners to take ownership in the health of their forest & maintain conditions into the future
- Small parcels (<20 acres) with tree density in excess of 100 trees per acre

The goal

Properly thinned, healthy, and fire-safe communities!



Forest Care Appointments Per Month



A topographic map header showing green and yellow contour lines and terrain features.

Day to Day GIS

- **Daily use of ArcGIS to check property lines**
- **Generate mailing lists for communities or neighborhoods**
- **View aerial imagery to see property features**





Forest Care Database

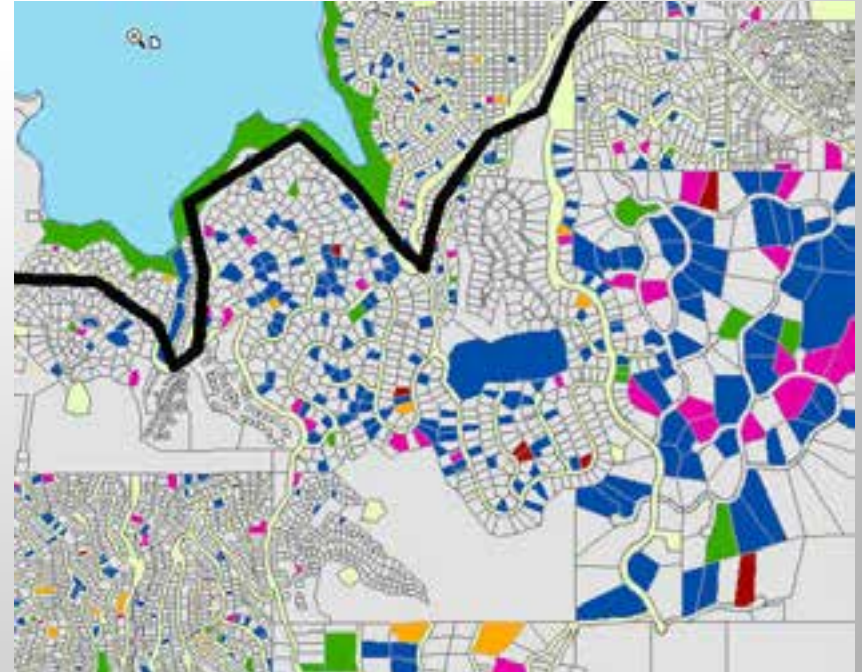
- **Contact database tracks participants through Forest Care program**
- **Tables and queries in MS Access joined with parcel layer to visualize geography of participants**
- **Properties categorized into: Complete, dropped, in contract, does not qualify, had appointment, no appointment**

Examples – First Law of Geography

Low rate of participation and completion

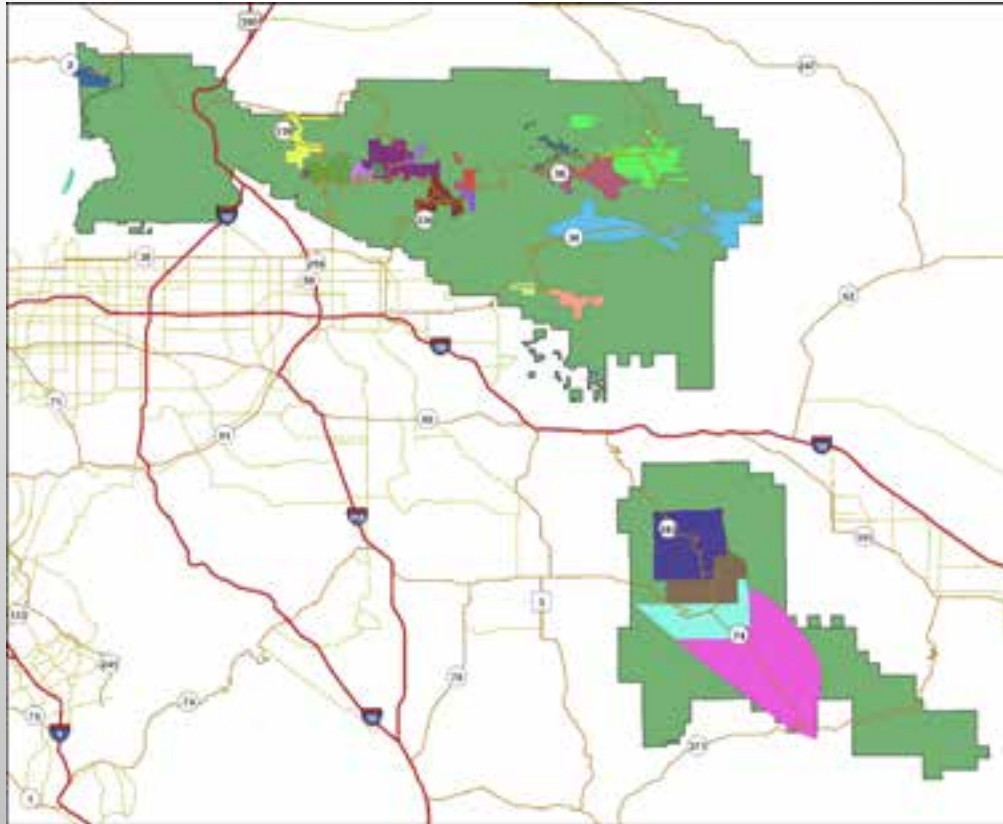


High rate of participation and completion



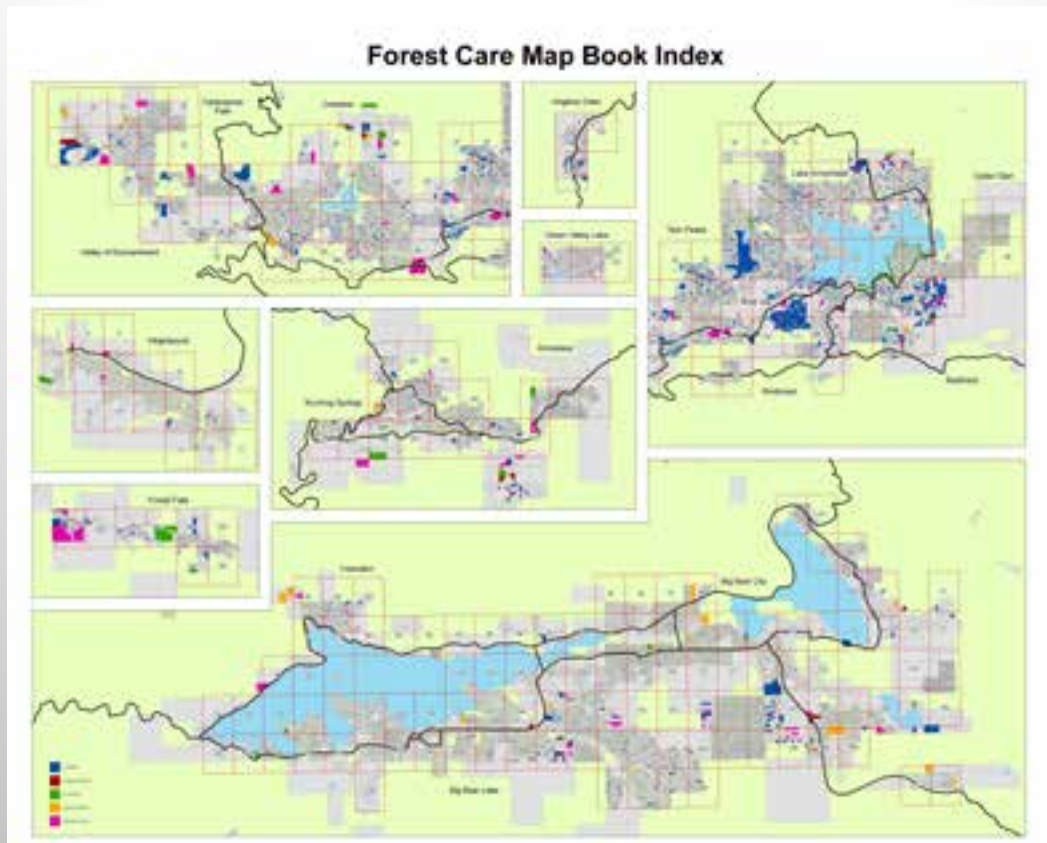
San Bernardino National Forest

85mi



70mi

Forest in panes



A topographic map showing green and yellow contour lines, with a small '500' label visible.

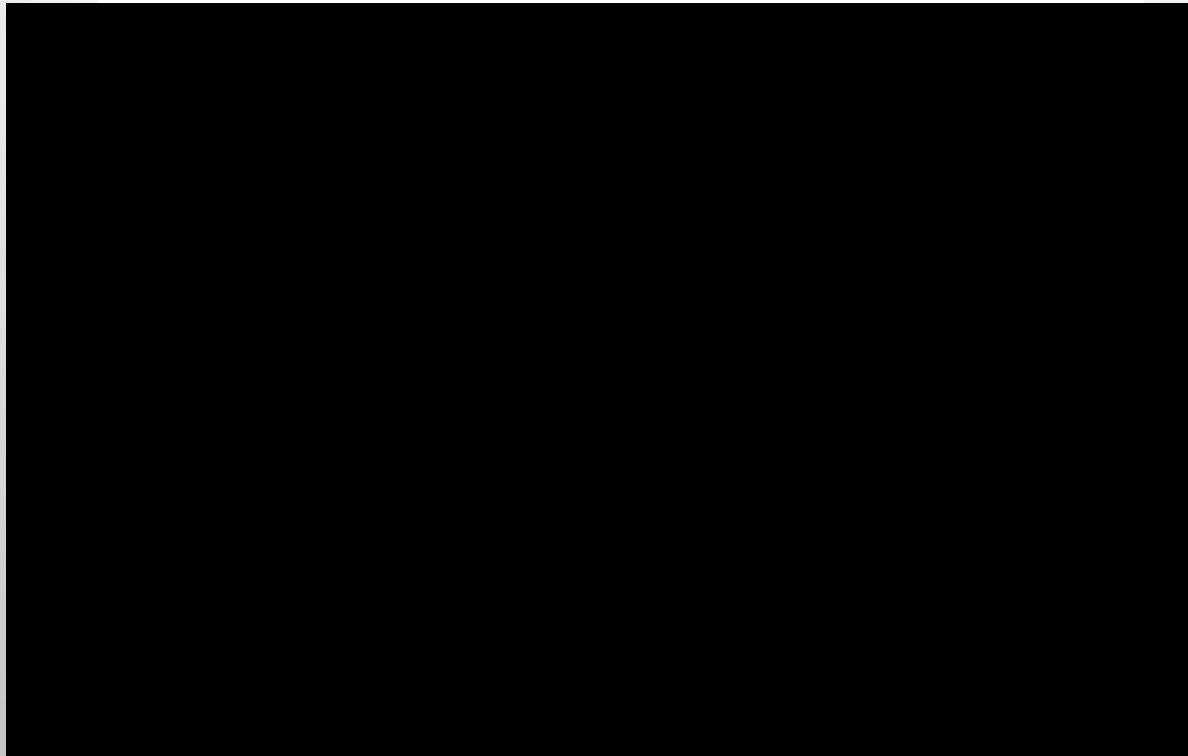
Map Book

- **Need existed to create map book of the privately owned land in the forest**
- **Foresters in the field make notes about areas that need treatment**
- **Targeted marketing to areas of high tree density**
- **Current status of Forest Care parcels is displayed in map book**

Map Book Pages

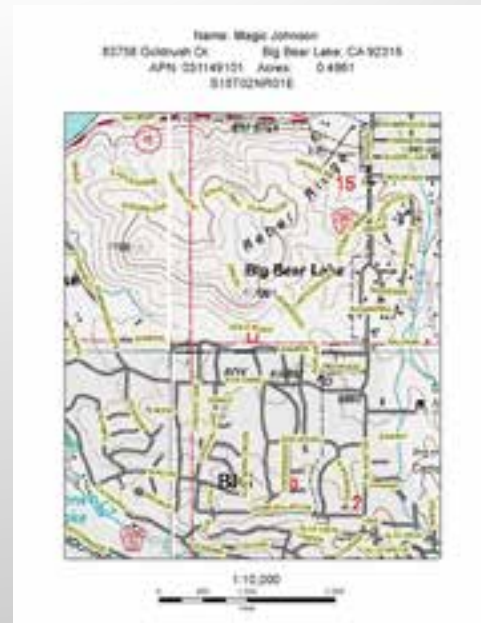


Map Book Index – In the map gallery

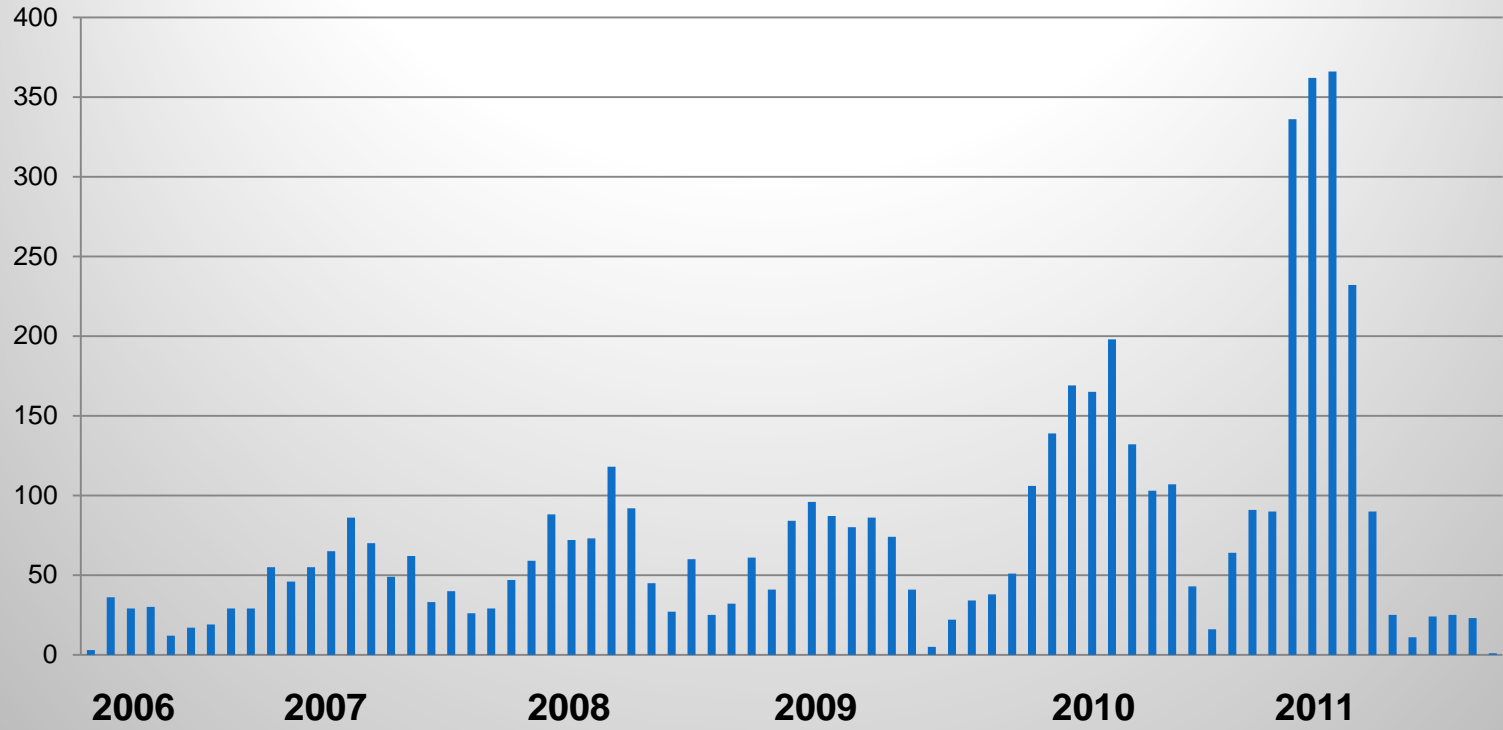


Map Automation

- Two maps created for every forester appointment
- ~20 Hours per week to make appointment maps



Forest Care Appointments Per Month



Data Driven Pages

Spreadsheet of the week's appointments from contact database

APN	Name	09Address1	09Address2	AppointmentDate	Forester	Site	Site2
03168404	Magic Johnson	P.O. Box 5503	Blue Jay, CA 92317	04-Apr-12	Gregg Bratcher	1192 Voltaire Dr	Lake Arrowhead, CA 92352
033017507	Kareem Abdul Jabar	14207 CALIFA ST	VAN NUYS, CA 91401	04-Apr-12	Gregg Bratcher	302 Jasper St.	Cedar Glen, CA 92321
030419101	Jerry West	301 RAVENNA DR #11	LONG BEACH, CA, 90803	05-Apr-12	Gregg Bratcher	1274 Pine Ridge Pl	Fairkin, CA 92331
032624361	Kurt Rambis	PO Box 1004	Chino Hills, CA 91709	05-Apr-12	Gregg Bratcher	3090 Glen Oak Dr.	Running Springs, CA 92382
033067303	AC Green	5916 COSTELLO AVE	VALLEY GLEN, CA, 91401	05-Apr-12	Gregg Bratcher	4368 Colusa Dr	Big Bear Lake, CA 92315
034525306	James Worthy	PO BOX 6045	BLUE JAY CA, 92317	06-Apr-12	Gregg Bratcher	740 Brentwood Dr	Lake Arrowhead, CA 92352

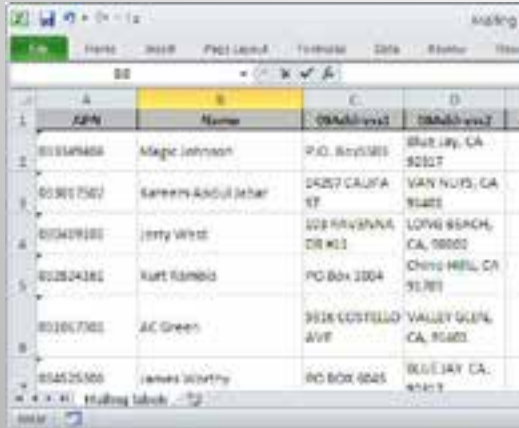
Data Driven Pages

- Open a ModelBuilder tool dialog
- Select the spreadsheet of appointments
- Run the tool



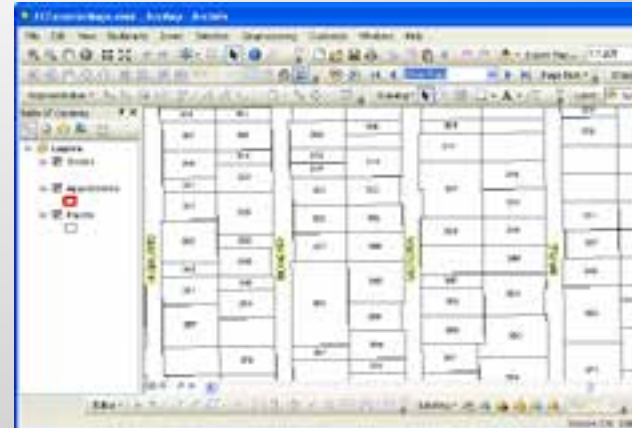
Data Driven Pages

- Appointments join to parcel feature class



A screenshot of a data table with columns labeled A, B, C, and D. The table contains several rows of data, including names, addresses, and locations.

A	B	C	D
013149400	Magic Johnson	P.O. Box 1201	Blut Jry, CA 90107
013017507	Sareem Abdul Jaber	2427 CAIFA ST	VAN NUYS, CA 91401
013029100	Jerry West	108 RIVARNA DR #11	LOVE BEACH, CA 90002
013041801	Kurt Kambid	PO Box 1004	Chico HILL, CA 95701
013067300	JC Green	3918 COSTELLO AVE	VALLEY SUELE, CA 91603
013025100	James Worthing	80 BOX 0025	BLUJAY CA, WA 911



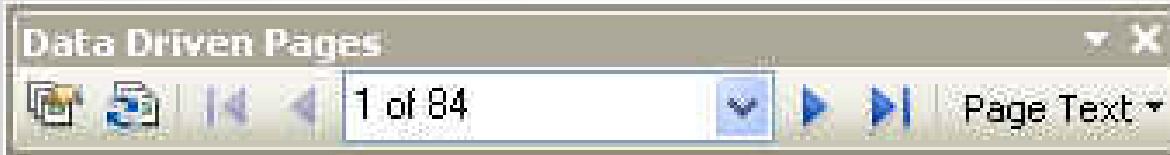
A decorative header at the top of the slide showing a portion of a topographic map with green contour lines and brown elevation markings. The number '5074' is visible on the map.

Data Driven Pages

- **Appointments are the index layer**
- **Scale is specified as 1:1200 for the parcel map, and 1:24,000 for the topo map**

Almost automated

- **Data Driven Pages toolbar allows staff to check all the appointments for the week**



- **The default scale is not always appropriate for the size and shape of the parcel**

A topographic map with green and yellow contour lines is visible at the top of the slide. The number '5074' is printed on the map.

Conclusion

- **Efficiency has improved**
- **Staff free for additional projects**
- **Effective communications**