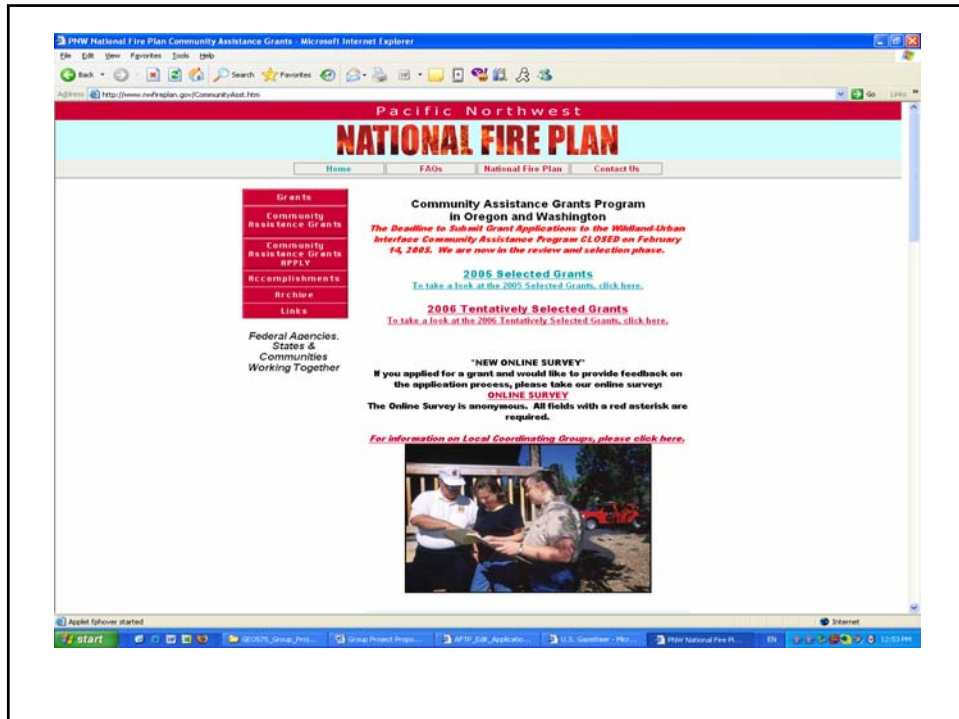




Outline

- Introduction & Background
- Design Objectives
- Data Layer Specifications and Geographic Extents
- Methods and Techniques
- Intended Application & Demonstration Application
- Limitations and Quality Statements
- References



The Wildland-Urban Interface

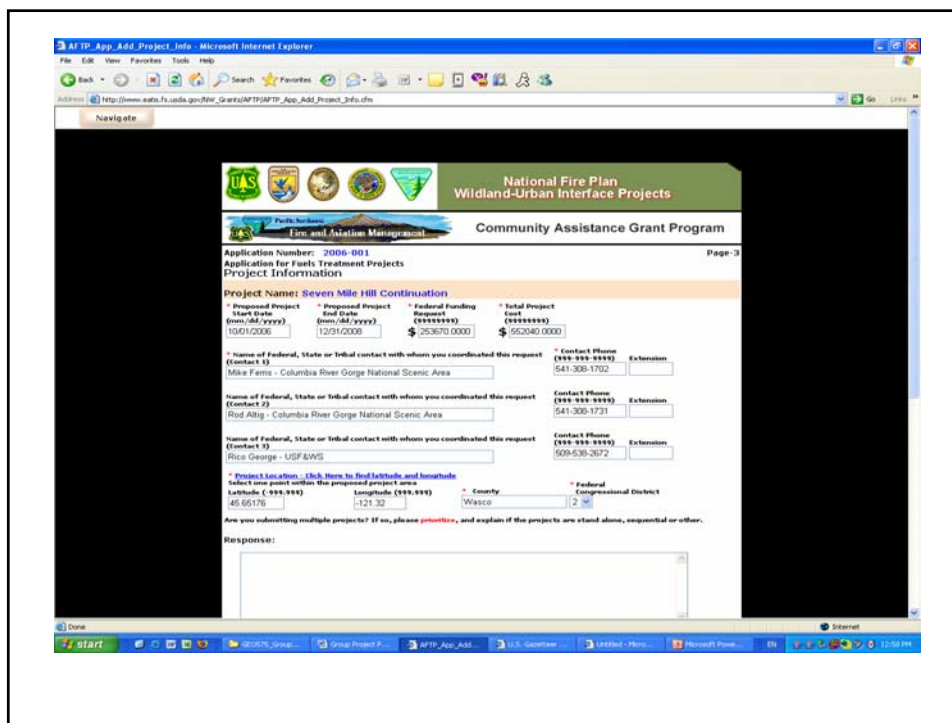
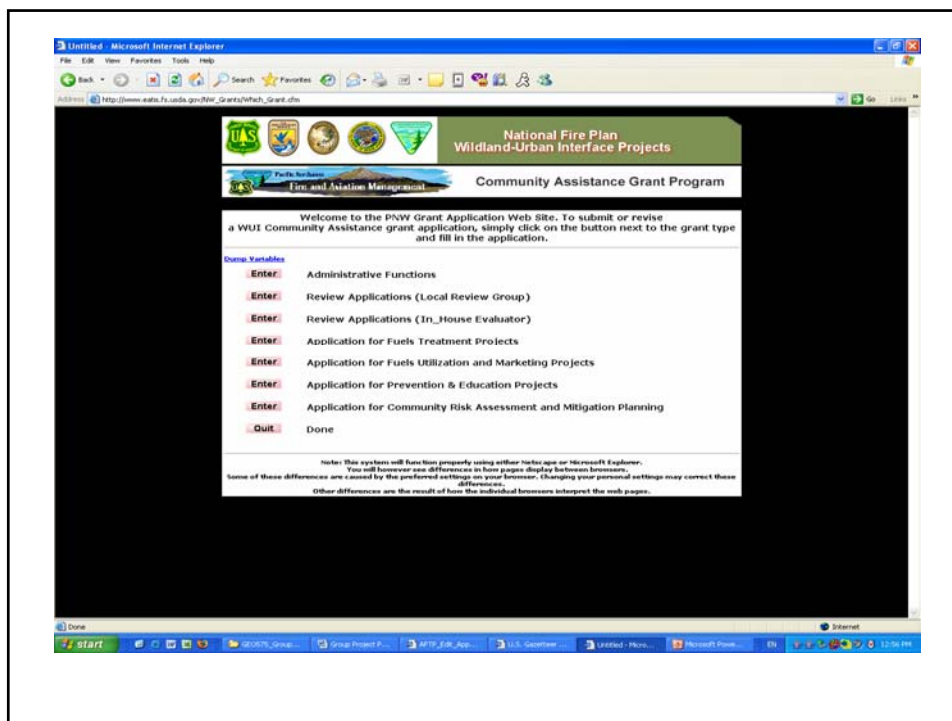


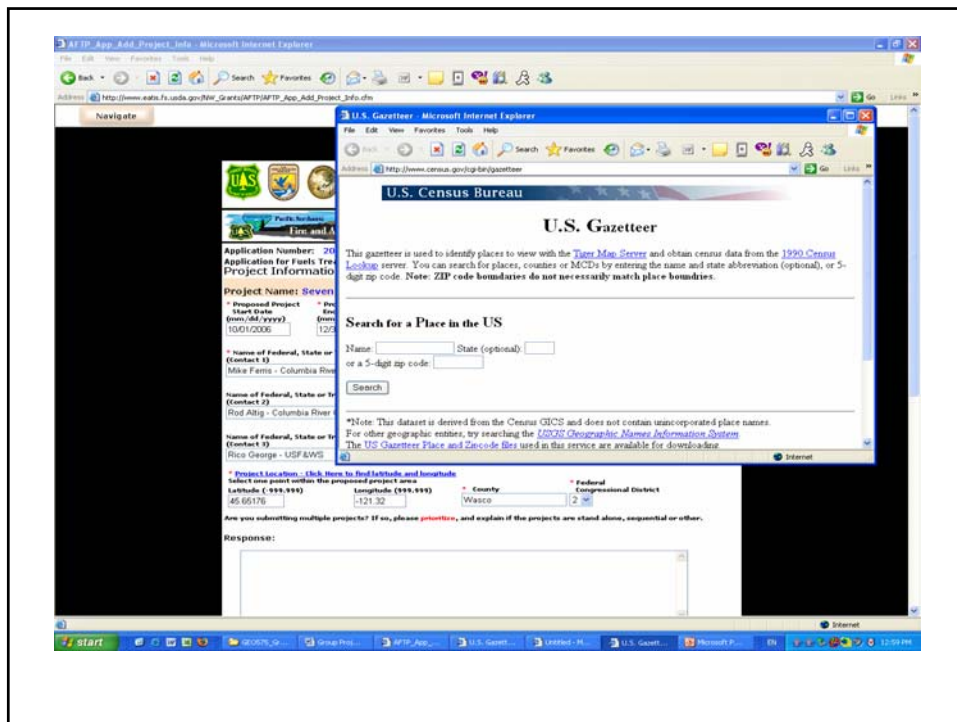
The Raw Data



Wildland-Urban Interface Community Assistance Program Overview					
Year	Total Interagency Amount Awarded	Total # of Applications	Total Dollars Requested	Total # of Grants Funded	% of Requested Dollar Amount Funded
2001	\$7 million	179	\$27,572,737	60	25%
2002	\$6.4 million	149	\$18,431,105	73	35%
2003	\$6.5 million	147	\$20,249,842	47	32%
2004	\$6.5 million	142	\$23,537,952	49	28%
2005	undefined	172	\$24,985,100	unknown	unknown

2005 Funded Grant Projects (As of July 14, 2005)					
App ID	Lead Agency	Applicant Name	Project Title	Total Project Cost	Total Recommended for Funding
1 Planning Projects					
01	BLM	Harris County Government	Fire Risk/Impact Assessment and Mitigation Plans for Harris County 20-Plans	\$204,000	\$190,000
102	BLM	Jackson County	Jackson County Integrated Fire Plan	\$100,000	\$50,000
14	BLM	Washington Department of Natural Resources	Mukah-HB Terrace Community Planning Project	\$7,700	\$3,700
148	BLM	Chelan County Fire District #1 & #2	Chelan County Fire District #1 & #2 Community Fire Plan	\$112,500	\$44,500
152	BLM	Chelan County Fire District #3	Chelan County Fire District #3 Community Fire Plan	\$72,000	\$33,000
25	FSWS	Fire Forest Owners Assoc.	Complete assessments and fire plan and assess progress with some threat of fire	\$20,000	\$12,000
32	FRS	Washington State University	Columbia Group Wildfire Preparedness Project Supplement	\$166,844	\$155,544
90	BLM	Plakemath Fire and Rescue	Benton County Hazardous Fuels Assessment	\$53,800	\$45,000
17	BLM	Washington Department of Natural Resources	MH-HM Community Fire Plan	\$60,000	\$40,000
160	BLM	ForSale Spokane	Spokane/Blaine Community Fire Risk Assessment and Mitigation Plan	\$5,075	\$3,044
37	BLA	Knapel Tyle of Indiana - Knapel Natural Resource Department	Wildland-Urban Interface Wildfire Hazard Assessment and Mitigation Plan for Fire Fuelage Reduction	\$156,752	\$61,425
104	BLM	Oregon Department of Forestry	Community Fire Planning	\$410,000	\$198,500
62	BLM	Washington Department of Natural Resources	Peaslee Community Risk Assessment and Mitigation Plan (Community Fire Plan)	\$128,000	\$102,000





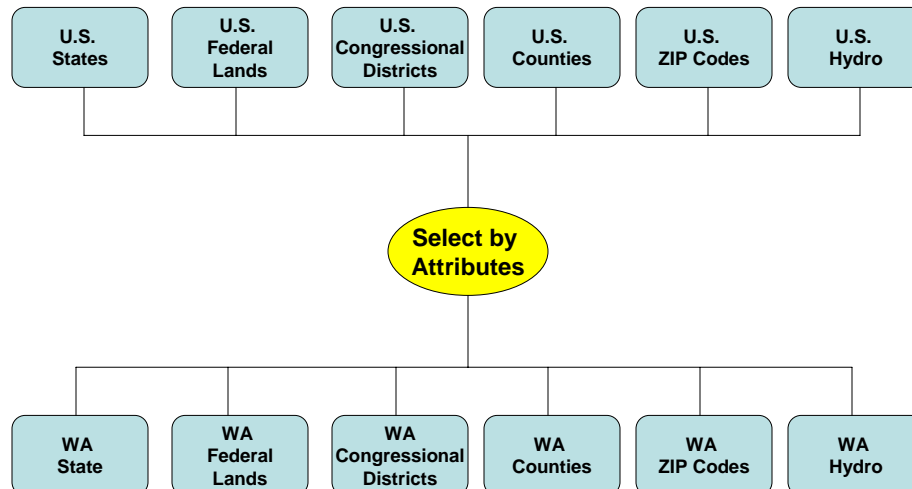
Data Layer Specifications and Geographic Extents

- Region 6 for the U.S. Forest Service and the Bureau of Land Management
- Washington and Oregon.

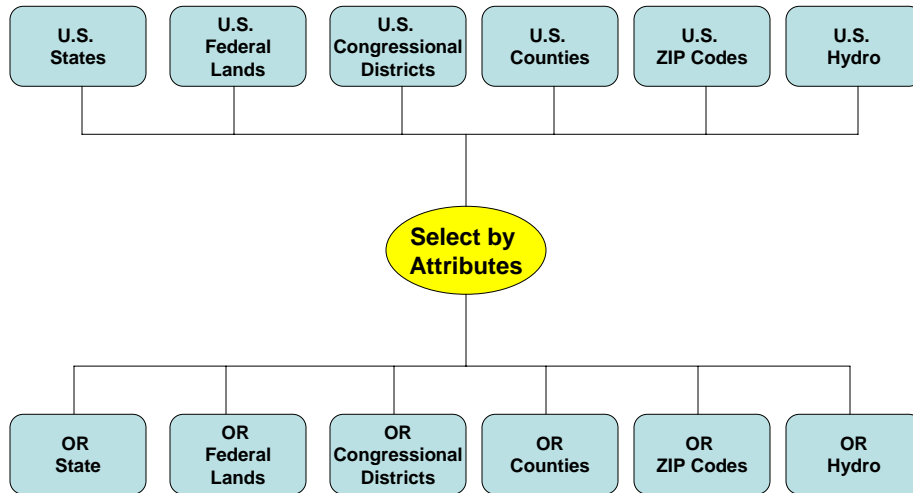
Spatial Data

Source	Original Data Layer	Method Used To Extract Selected Data Layers	Selected Data Layer(s)
ESRI	U.S. States	Select by attributes	WA State; OR State
ESRI	U.S. Zip Codes	Select by attributes	WA Zip Codes; OR Zip Codes
ESRI	U.S. Counties	Select by attributes	WA State Counties; OR State Counties
ESRI	U.S. Federal Lands	Select by attributes	WA State Federal Lands; OR State Federal Lands
ESRI	U.S. Congressional Districts	Select by attributes	WA State Congressional Districts; OR State Congressional Districts
ESRI	U.S. Hydro	Select by attributes	WA State Hydro; OR State Hydro

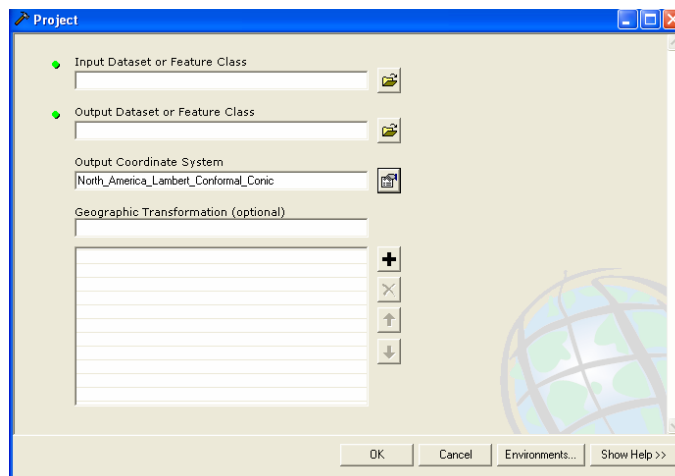
WA State Data Extraction



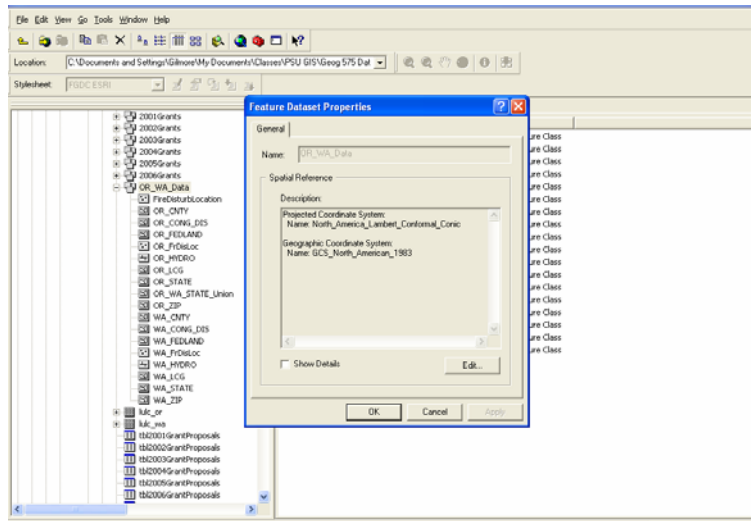
OR State Data Extraction



Data Reprojection



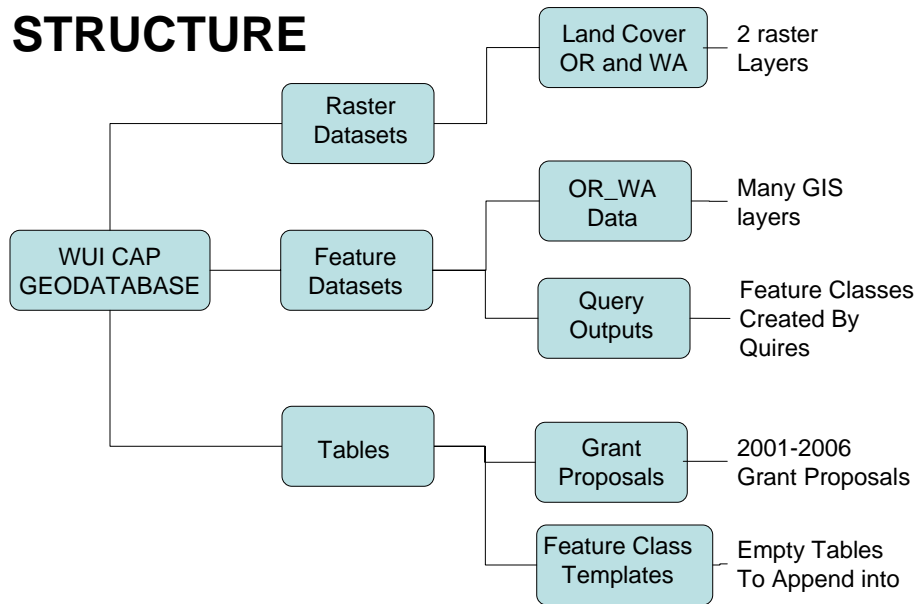
Geodatabase Spatial Reference



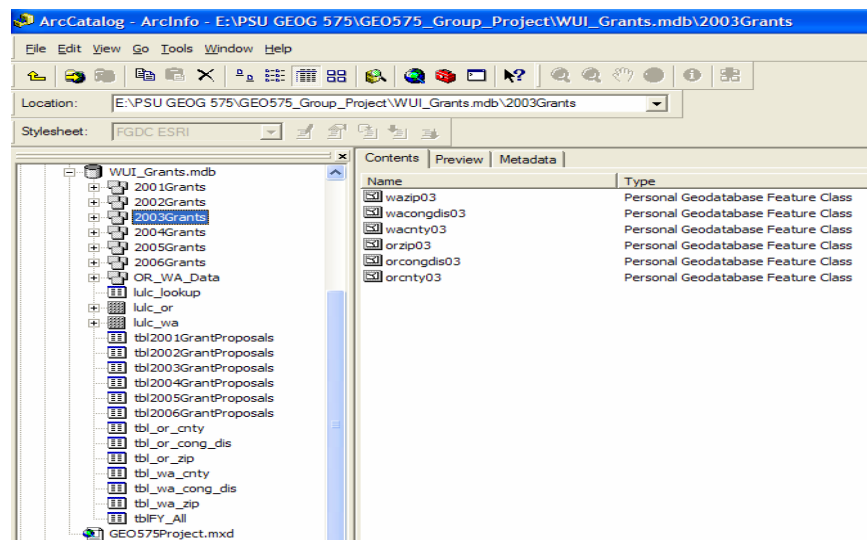
Design Objectives

- Transfer the information currently in the Access database into a geodatabase.
- Combine this with associated land cover and jurisdictional map features.
- Finally display attribute and spatial data

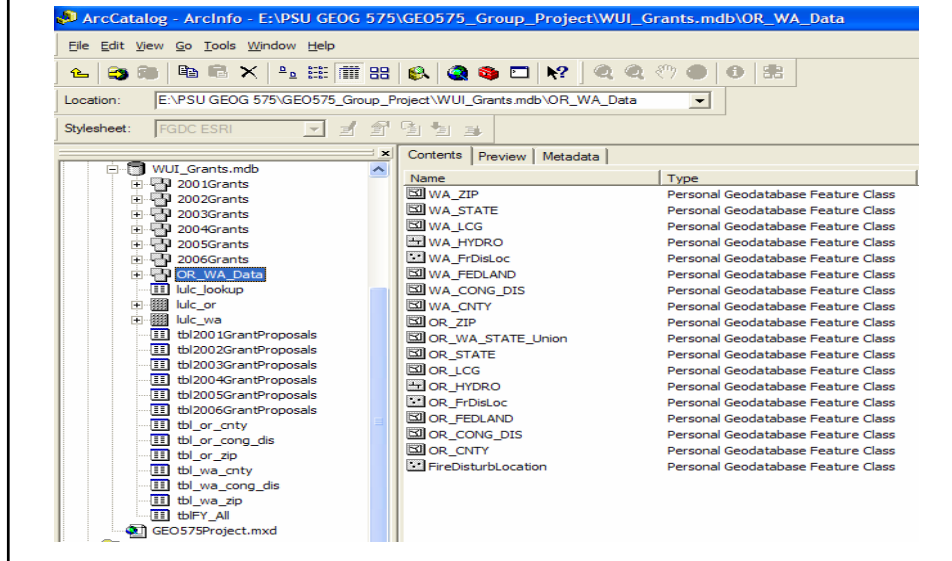
GEODATA BASE STRUCTURE



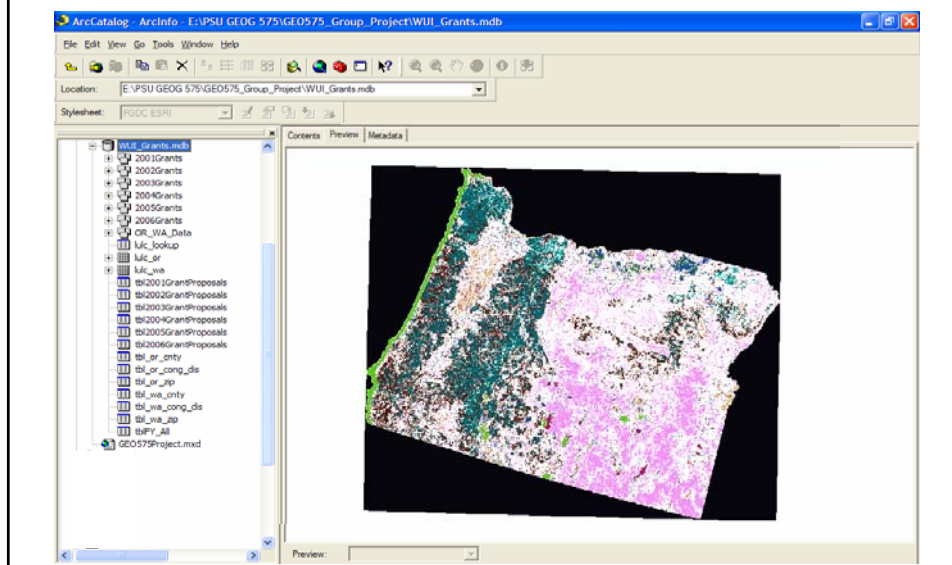
Feature Datasets and Attributes



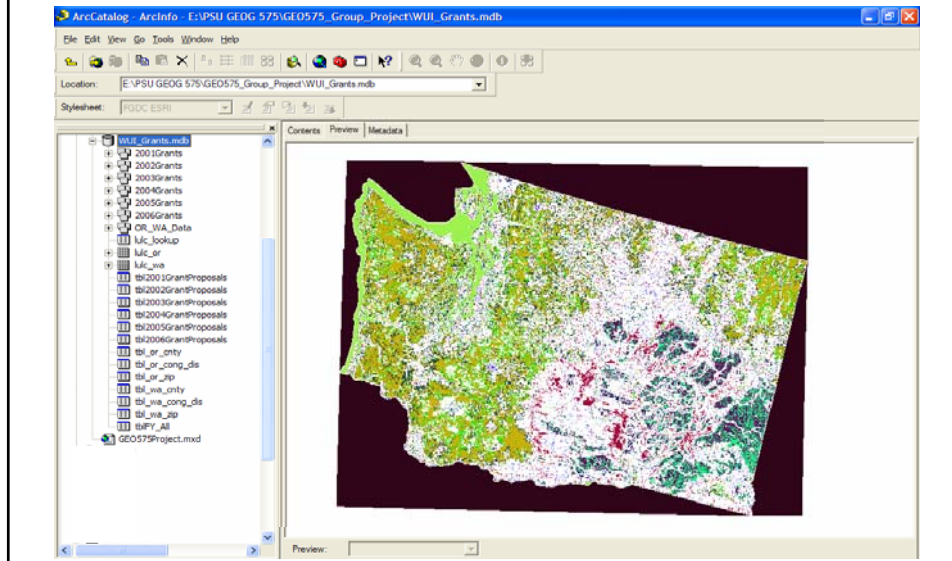
Feature Datasets and Attributes



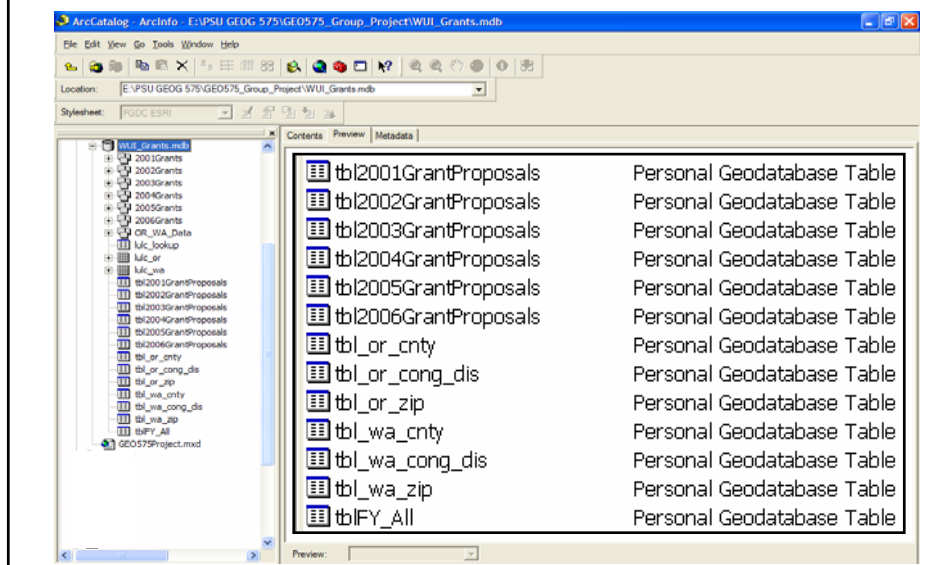
Raster Datasets



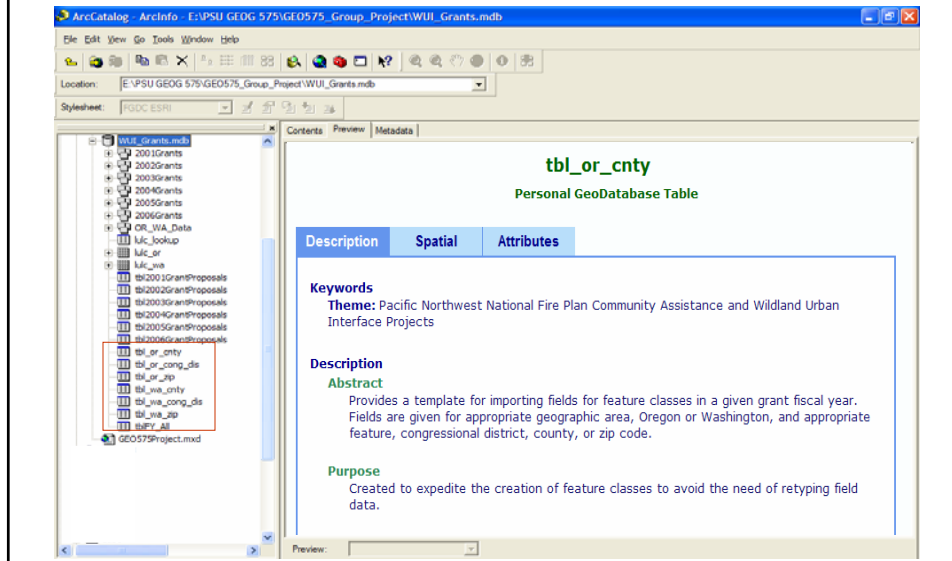
Raster Datasets



Tabular Data



Metadata



Methods and Techniques

- ArcCatalog
- Microsoft Access
- Lots of Coffee

Normalization/Standardization

The image displays three Microsoft Access tables, each with a list of fields and their data types. The tables are:

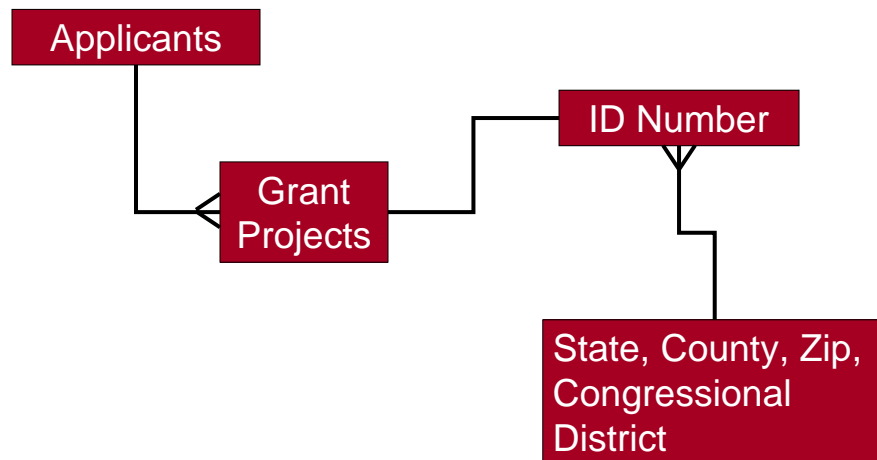
- [tbl2001GrantProposals : Table]**
- [tbl2003GrantProposals : Table]**
- [tbl2006GrantProposals : Table]**

Each table has a 'Field Name' column and a 'Field Type' column. The fields are organized into sections: General, Location, Financials, and Project Details. The data types include Text, Number, Date/Time, Currency, Memo, Yes/No, and Lookup Wizard.

Table 1: [tbl2001GrantProposals : Table]

Field Name	Field Type
Applicant	Text
ApplicantID	Text
ApplicantType	Text
ApplicantAddress	Text
ApplicantCity	Text
ApplicantState	Text
ApplicantCountry	Text
ApplicantPhone	Text
ApplicantFax	Text
ApplicantEmail	Text
ApplicantWebsite	Text
ApplicantAddress2	Text
ApplicantCity2	Text
ApplicantState2	Text
ApplicantCountry2	Text
ApplicantPhone2	Text
ApplicantFax2	Text
ApplicantEmail2	Text
ApplicantWebsite2	Text
ApplicantAddress3	Text
ApplicantCity3	Text
ApplicantState3	Text
ApplicantCountry3	Text
ApplicantPhone3	Text
ApplicantFax3	Text
ApplicantEmail3	Text
ApplicantWebsite3	Text
ApplicantAddress4	Text
ApplicantCity4	Text
ApplicantState4	Text
ApplicantCountry4	Text
ApplicantPhone4	Text
ApplicantFax4	Text
ApplicantEmail4	Text
ApplicantWebsite4	Text
ApplicantAddress5	Text
ApplicantCity5	Text
ApplicantState5	Text
ApplicantCountry5	Text
ApplicantPhone5	Text
ApplicantFax5	Text
ApplicantEmail5	Text
ApplicantWebsite5	Text
ApplicantAddress6	Text
ApplicantCity6	Text
ApplicantState6	Text
ApplicantCountry6	Text
ApplicantPhone6	Text
ApplicantFax6	Text
ApplicantEmail6	Text
ApplicantWebsite6	Text
ApplicantAddress7	Text
ApplicantCity7	Text
ApplicantState7	Text
ApplicantCountry7	Text
ApplicantPhone7	Text
ApplicantFax7	Text
ApplicantEmail7	Text
ApplicantWebsite7	Text
ApplicantAddress8	Text
ApplicantCity8	Text
ApplicantState8	Text
ApplicantCountry8	Text
ApplicantPhone8	Text
ApplicantFax8	Text
ApplicantEmail8	Text
ApplicantWebsite8	Text
ApplicantAddress9	Text
ApplicantCity9	Text
ApplicantState9	Text
ApplicantCountry9	Text
ApplicantPhone9	Text
ApplicantFax9	Text
ApplicantEmail9	Text
ApplicantWebsite9	Text
ApplicantAddress10	Text
ApplicantCity10	Text
ApplicantState10	Text
ApplicantCountry10	Text
ApplicantPhone10	Text
ApplicantFax10	Text
ApplicantEmail10	Text
ApplicantWebsite10	Text
ApplicantAddress11	Text
ApplicantCity11	Text
ApplicantState11	Text
ApplicantCountry11	Text
ApplicantPhone11	Text
ApplicantFax11	Text
ApplicantEmail11	Text
ApplicantWebsite11	Text
ApplicantAddress12	Text
ApplicantCity12	Text
ApplicantState12	Text
ApplicantCountry12	Text
ApplicantPhone12	Text
ApplicantFax12	Text
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ApplicantCountry13	Text
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ApplicantFax13	Text
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ApplicantWebsite13	Text
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ApplicantState14	Text
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ApplicantPhone14	Text
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ApplicantAddress23	Text
ApplicantCity23	Text
ApplicantState23	Text
ApplicantCountry23	Text

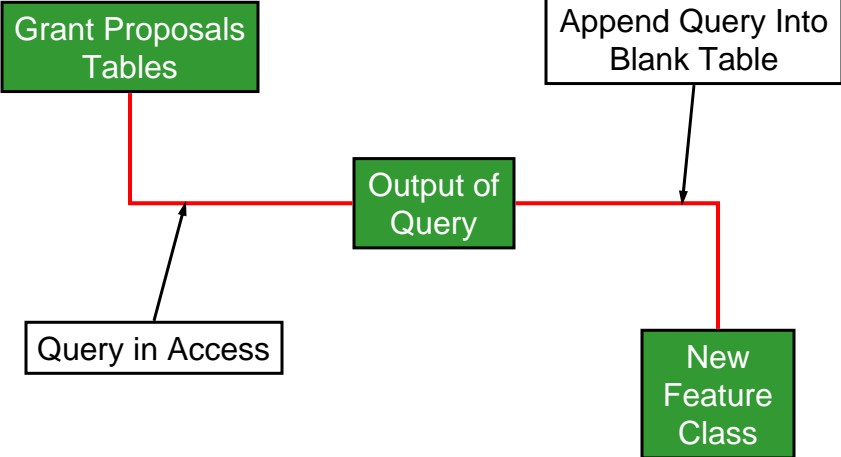
DATA BASE E-R CONNECTIONS



Access view of Tables

Queries in Access

PROCESS



Query for State and Funded

The screenshot shows the Microsoft Access interface. The title bar reads 'Microsoft Access - [qry2003_OR_Fund : Select Query]'. The menu bar includes File, Edit, View, Insert, Query, Tools, Window, and Help. The toolbar contains various icons for database operations. The 'Security' tab is active in the top right. A dropdown menu for 'tbl2003GrantProposals' is open, showing a list of fields: ApplicationID, AvailFund01, AvailFund02, AvailFund03, AvailFund04, AvailFund05, AvailFund06, AvailFund07, AvailFund08, AvailFund09, and AvailFund10. The main area displays a table grid with the following columns: GrantID (tbl2003GrantProposals), Application_Type (tbl2003GrantProposals), TotalAppCost (tbl2003GrantProposals), AvailAppCost (tbl2003GrantProposals), TotalFund (tbl2003GrantProposals), State (tbl2003GrantProposals), AvailFund01 (tbl2003GrantProposals), AvailFund02 (tbl2003GrantProposals), AvailFund03 (tbl2003GrantProposals), AvailFund04 (tbl2003GrantProposals), AvailFund05 (tbl2003GrantProposals), AvailFund06 (tbl2003GrantProposals), AvailFund07 (tbl2003GrantProposals), AvailFund08 (tbl2003GrantProposals), and AvailFund09 (tbl2003GrantProposals). The table is currently empty, with only the header row visible. The status bar at the bottom shows 'Ready' and a list of open applications including 'start', 'Excel - Spreads...', 'Microsoft Pro...', 'Access2003', 'WMA_Video', 'qry2003_OR...', 'qry2003_OR...', 'Yahoo Mail', 'MP3 - J...', and '1:13 PM'.

SQL for State and Funded

- SELECT tbl2003GrantProposals.GrantID,
tbl2003GrantProposals.Application_Type,
tbl2003GrantProposals.TotalProjCost,
tbl2003GrantProposals.AmtRequested,
tbl2003GrantProposals.TotalFunded, tbl2003GrantProposals.State,
tbl2003GrantProposals.AmtFundedFS,
tbl2003GrantProposals.AmtFundedBLM,
tbl2003GrantProposals.AmtFundedFWS,
tbl2003GrantProposals.AmtFundedBIA,
tbl2003GrantProposals.AmtFundedFSWUI,
tbl2003GrantProposals.CongressionalID,
tbl2003GrantProposals.County, tbl2003GrantProposals.City,
tbl2003GrantProposals.ZipCode, tbl2003GrantProposals.Lat,
tbl2003GrantProposals.Long
- FROM tbl2003GrantProposals
- WHERE (((tbl2003GrantProposals.TotalFunded)>0) AND
((tbl2003GrantProposals.State)="or"));

Query for Counties

The screenshot shows the Microsoft Access interface for a query named 'qry2003_OR_CNTY'. The table design view is displayed, showing the following fields and their data types:

Field Name	Data Type
GrantID	Number
Application_Type	Text
TotalProjCost	Number
AmtRequested	Number
TotalFunded	Number
AmtFundedFS	Number
AmtFundedBLM	Number
AmtFundedFWS	Number
AmtFundedBIA	Number
AmtFundedFSWUI	Number
CongressionalID	Text
County	Text
City	Text
ZipCode	Text
Lat	Text
Long	Text

The data grid below the design view shows the following data:

GrantID	Application_Type	TotalProjCost	AmtRequested	TotalFunded	AmtFundedFS	AmtFundedBLM	AmtFundedFWS	AmtFundedBIA	AmtFundedFSWUI	CongressionalID	County	City	ZipCode	Lat	Long
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

SQL for Counties

- SELECT OR_CNTY.Shape, qry2003_OR_Fund.GrantID, qry2003_OR_Fund.Application_Type, qry2003_OR_Fund.TotalProjCost, qry2003_OR_Fund.AmtRequested, qry2003_OR_Fund.TotalFunded, qry2003_OR_Fund.AmtFundedFSWUI, qry2003_OR_Fund.AmtFundedFWS, qry2003_OR_Fund.AmtFundedBIA, qry2003_OR_Fund.AmtFundedBLM, qry2003_OR_Fund.AmtFundedFS, OR_CNTY.NAME, OR_CNTY.STATE_NAME, OR_CNTY.STATE_FIPS, OR_CNTY.CNTY_FIPS, OR_CNTY.FIPS, OR_CNTY.SQMI, OR_CNTY.Shape_Length, OR_CNTY.Shape_Area
- FROM (OR_CNTY INNER JOIN OR_CNTY_Shape_Index ON OR_CNTY.OBJECTID_1 = OR_CNTY_Shape_Index.IndexedObjectId) INNER JOIN qry2003_OR_Fund ON OR_CNTY.NAME = qry2003_OR_Fund.County;

Query Output

Microsoft Access - [arg2001_OR_CNTY : Select Query]

File Edit View Insert Format Records Tools Window Help

Security

Print a question for help

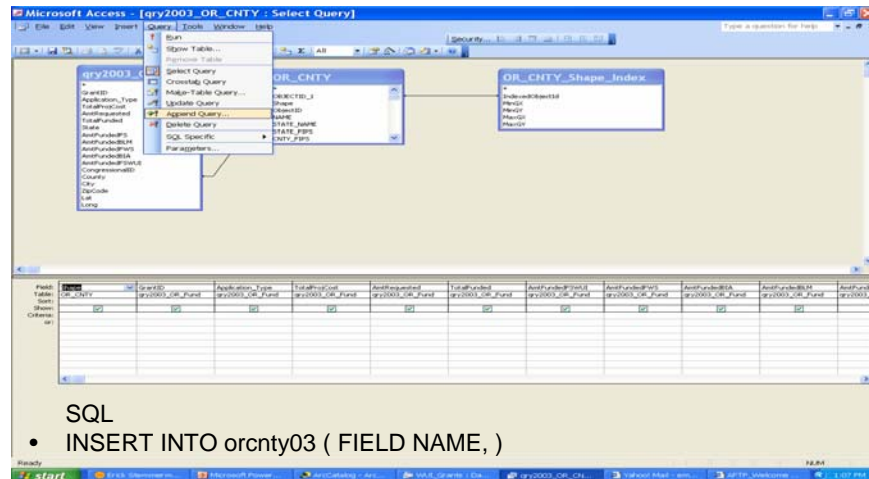
ID	State	Application	Type	Total	Name
arg binary data 2003-013	Fuets	100636	100636	0	0
arg binary data 2003-014	Fuets	42989	42989	0	0
arg binary data 2003-015	Fuets	199592	199592	0	0
arg binary data 2003-017	Fuets	100070	73550	0	0
arg binary data 2003-020	Fuets	190117	115317	40000	0
arg binary data 2003-022	Fuets	139900	110640	110640	0
arg binary data 2003-024	Planning	76645	76665	0	0
arg binary data 2003-025	Fuets	233200	124300	124300	0
arg binary data 2003-026	Fuets	876300	291600	291600	0
arg binary data 2003-045	UHM	68000	35000	35000	0
arg binary data 2003-048	Fuets	79000	68000	68000	0
arg binary data 2003-054	Fuets	614999	257600	257600	0
arg binary data 2003-056	Fuets	802666	121666	0	0
arg binary data 2003-057	Fuets	359996	257196	257196	0
arg binary data 2003-058	Fuets	521900	257196	257196	0
arg binary data 2003-060	Fuets	174900	123480	60000	0
arg binary data 2003-062	Fuets	276514	241741	241741	0
arg binary data 2003-063	Fuets	264101	219318	219318	0
arg binary data 2003-064	Fuets	648024	356693	356693	0
arg binary data 2003-066	Fuets	66202	66202	66202	0
arg binary data 2003-067	Fuets	366033	262000	262000	0
arg binary data 2003-068	Fuets	195640	67150	67150	0
arg binary data 2003-072	Fuets	116650	25000	25000	0
arg binary data 2003-073	Fuets	318650	25000	25000	0
arg binary data 2003-074	Fuets	318650	25000	25000	0
arg binary data 2003-076	Fuets	64300	62400	62400	0
arg binary data 2003-081	PAE	67164	26200	26200	0
arg binary data 2003-082	Fuets	264000	300019	300019	0
arg binary data 2003-095	Fuets	315745	254625	254625	0
arg binary data 2003-094	Fuets	37700	25000	25000	0

Record: 14 of 14

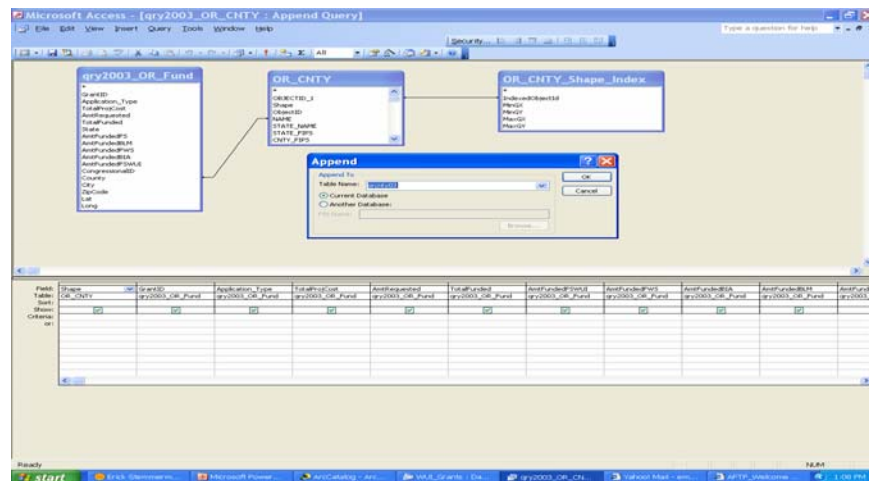
of 20

14/14

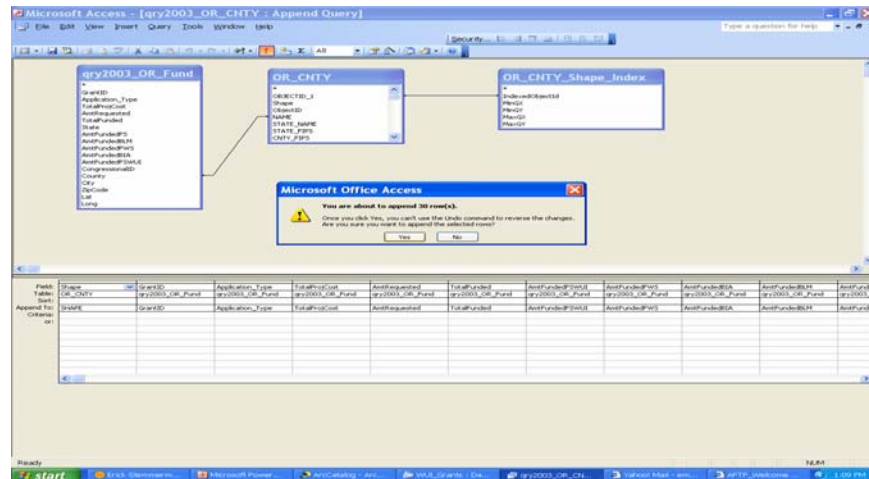
Append Query



Append Query



Append Query

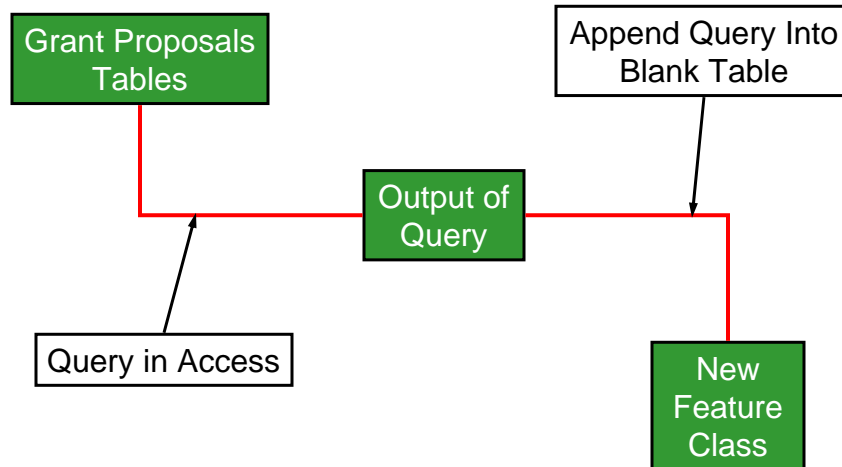


Query Append Output

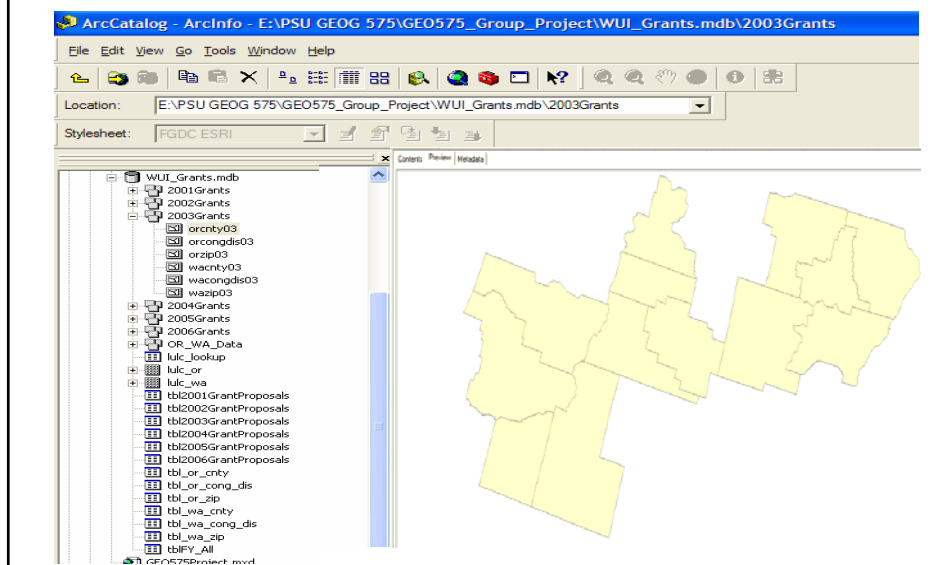
Microsoft Access - [qry2003 : Table]

OBJECTID	SHAPE	QueueID	Application_Type	TotalingCost	AmntRequested	TotalCost	AmntUnder\$50	AmntUnder\$500	AmntUnder\$1K	AmntUnder\$5K	AmntUnder\$10K	NAME
1	org binary data 2003-013	Fuels	100035	100035	100035	0	0	0	0	100035	0	Deschutes
2	org binary data 2003-014	Fuels	42089	42089	42089	0	0	0	0	42089	0	Jackson
3	org binary data 2003-015	Fuels	199592	199592	199592	0	0	0	0	199592	0	Clatsop
4	org binary data 2003-017	Fuels	180070	73550	73550	0	0	0	0	73550	0	Deschutes
5	org binary data 2003-020	Fuels	190317	115317	40000	0	0	0	0	0	0	Deschutes
6	org binary data 2003-022	Fuels	139000	110840	110840	0	0	0	0	0	0	Clatsop
7	org binary data 2003-024	Planning	16540	7695	7695	0	0	0	0	7695	0	Jackson
8	org binary data 2003-029	Fuels	232300	124300	124300	0	0	0	0	0	0	Deschutes
9	org binary data 2003-038	Fuels	375300	291500	291500	0	0	0	0	291500	0	Jackson
10	org binary data 2003-046	U&M	16000	8000	8000	0	0	0	0	8000	0	Deschutes
11	org binary data 2003-046	Fuels	79000	68000	68000	0	0	0	0	68000	0	Deschutes
12	org binary data 2003-054	Fuels	514999	257600	257600	0	0	0	0	0	0	Crook
13	org binary data 2003-055	Fuels	367966	221886	221886	0	0	0	0	221886	0	Wheeler
14	org binary data 2003-057	Fuels	359596	257186	257186	0	0	0	0	257186	0	Douglas
15	org binary data 2003-058	Fuels	321900	257250	257250	0	0	0	0	257250	0	Umatilla
16	org binary data 2003-060	Fuels	174890	124340	50000	0	0	0	0	0	0	50000 Umatilla
17	org binary data 2003-062	Fuels	278114	241741	241741	0	0	0	0	0	0	Douglas
18	org binary data 2003-063	Fuels	264101	219318	219318	0	0	0	0	219318	0	Douglas
19	org binary data 2003-064	Fuels	343804	266683	266683	0	0	0	0	266683	0	Douglas
20	org binary data 2003-066	Fuels	66202	66202	66202	0	0	0	0	66202	0	Clatsop
21	org binary data 2003-067	Fuels	365333	262500	262500	0	0	0	0	262500	0	Jackson
22	org binary data 2003-068	Fuels	199592	97150	90000	0	0	0	0	90000	0	Deschutes
23	org binary data 2003-072	Fuels	316650	253000	253000	0	0	0	0	253000	0	Raker
24	org binary data 2003-073	Fuels	316650	253000	253000	0	0	0	0	253000	0	Wahwa
25	org binary data 2003-074	Fuels	316650	253000	253000	0	0	0	0	253000	0	Crook
26	org binary data 2003-076	Fuels	64300	62400	62400	0	0	0	0	0	0	Crook
27	org binary data 2003-081	PAE	67164	26306	26306	0	0	0	0	26306	0	Crook
28	org binary data 2003-082	Fuels	294000	250000	202019	0	0	0	0	202019	0	Lane
29	org binary data 2003-086	Fuels	318745	254026	254026	0	0	0	0	254026	0	Grant
30	org binary data 2003-094	Fuels	37700	28500	28500	0	0	0	0	28500	0	Deschutes

PROCESS



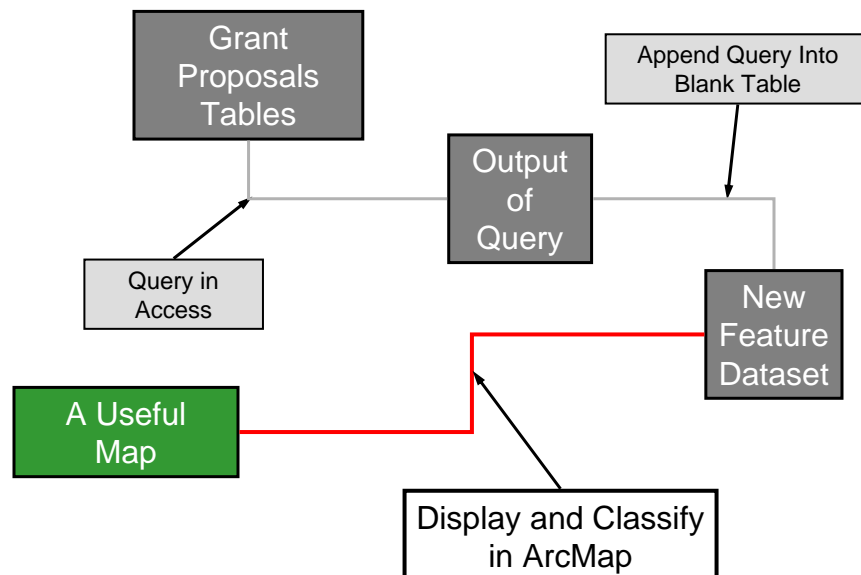
Feature Class from Append



Intended Application & Demonstration Application

- To assist federal and state land managers in making decisions for the allocation of grant funds in support of the National Fire Plan

Demonstration Application Process



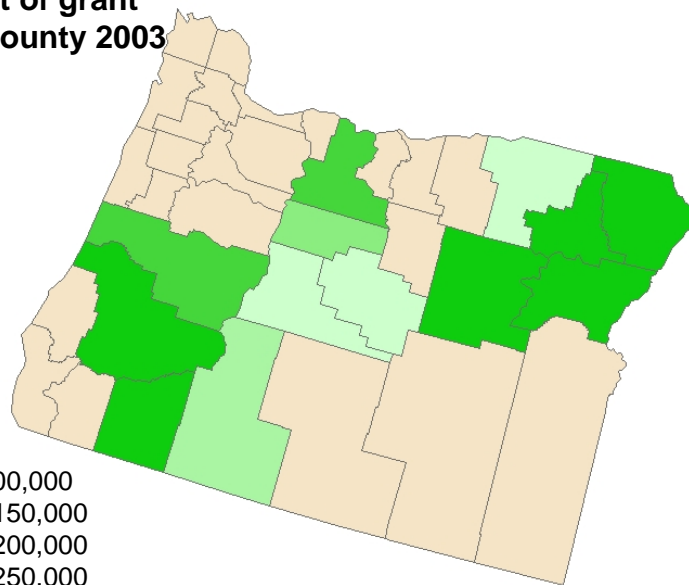
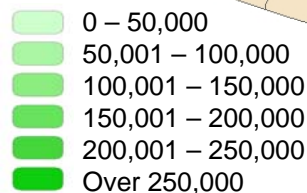
Demonstration of the utility of the Database

A few hypothetical questions and answers

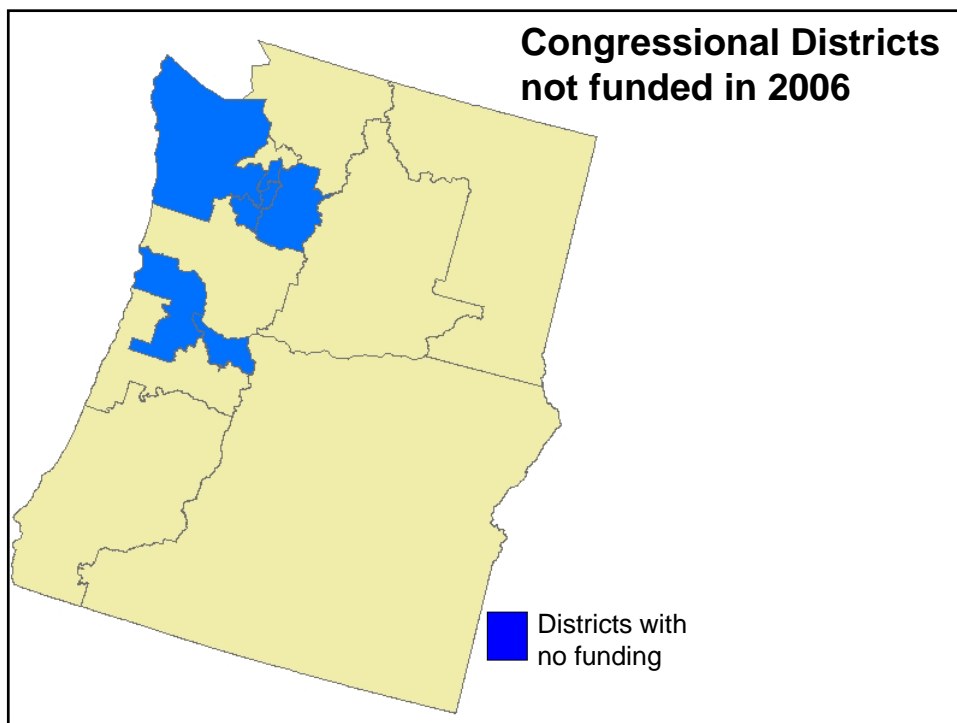
- What counties are did we award grants to in Oregon in 2003?
- In 2006 which Congressional Districts in both Oregon and Washington didn't get awarded any grant money?
- Where did we award money in Washington in 2005 and 2006 and is it near federal lands and where fires have happened?
- Can we use grant point data for 2003 to show if awards were near fire disturbances?

**Total amount of grant
funding by county 2003**

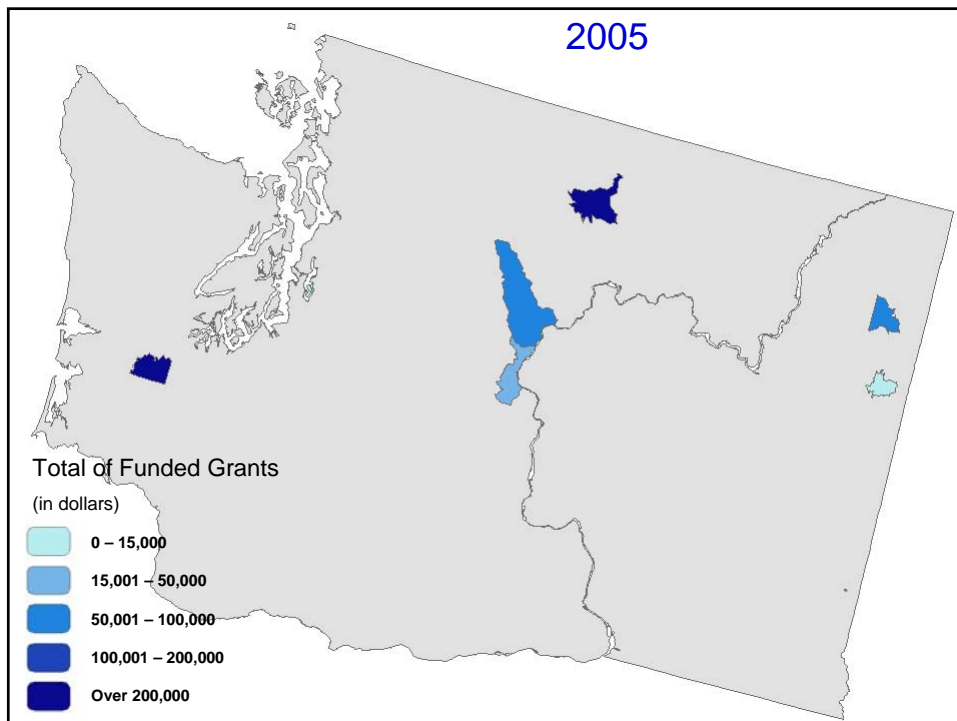
Total funding
(in dollars)

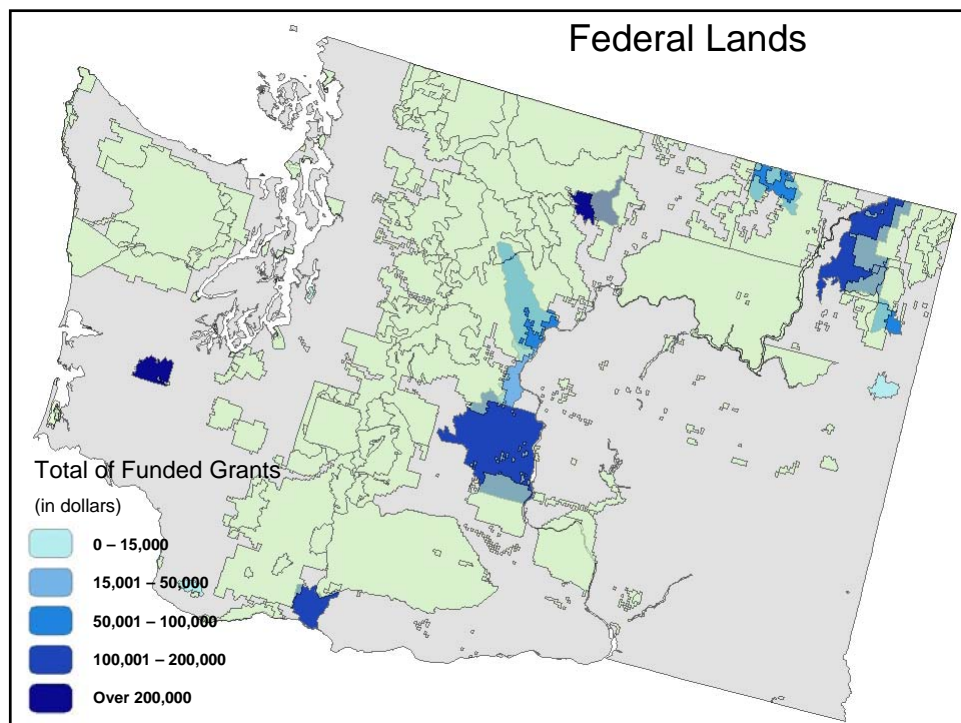
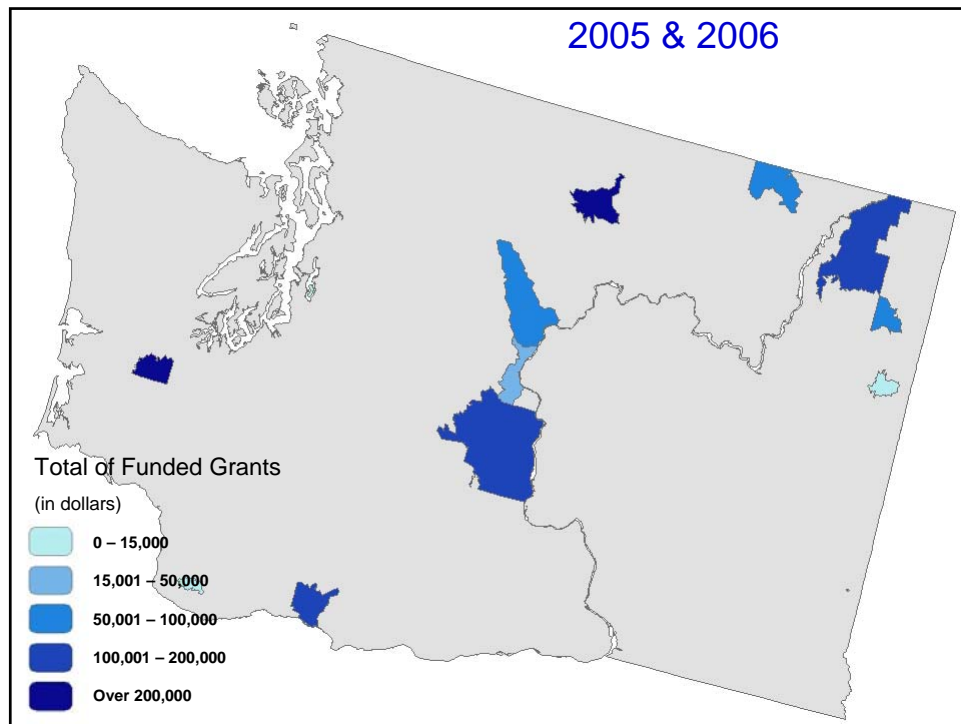


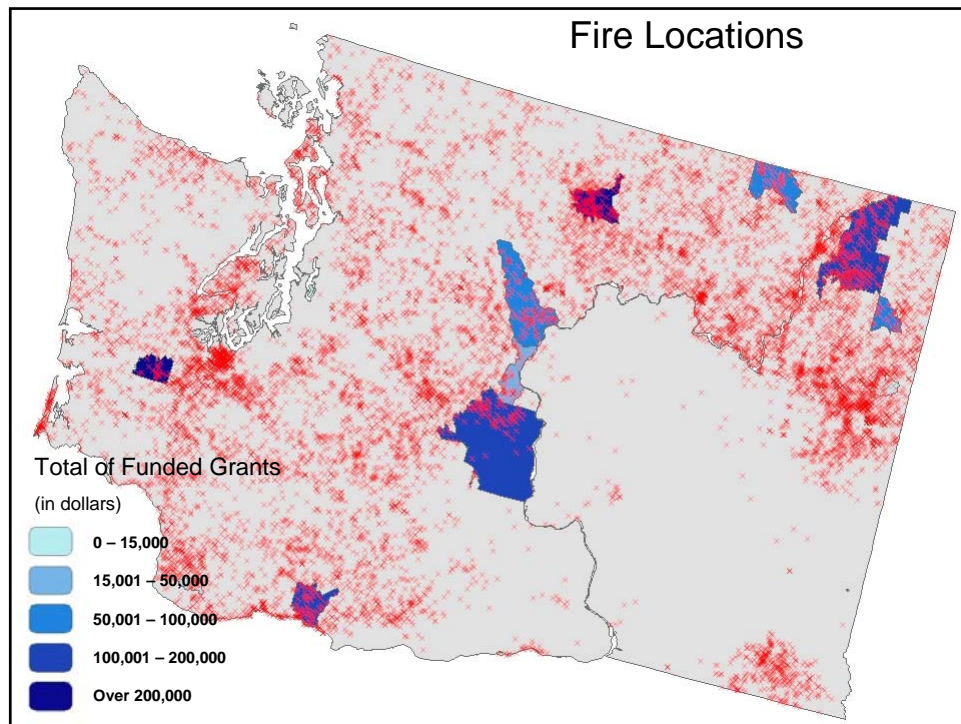
In 2006 which Congressional Districts in both Oregon and Washington didn't get awarded any grant money?



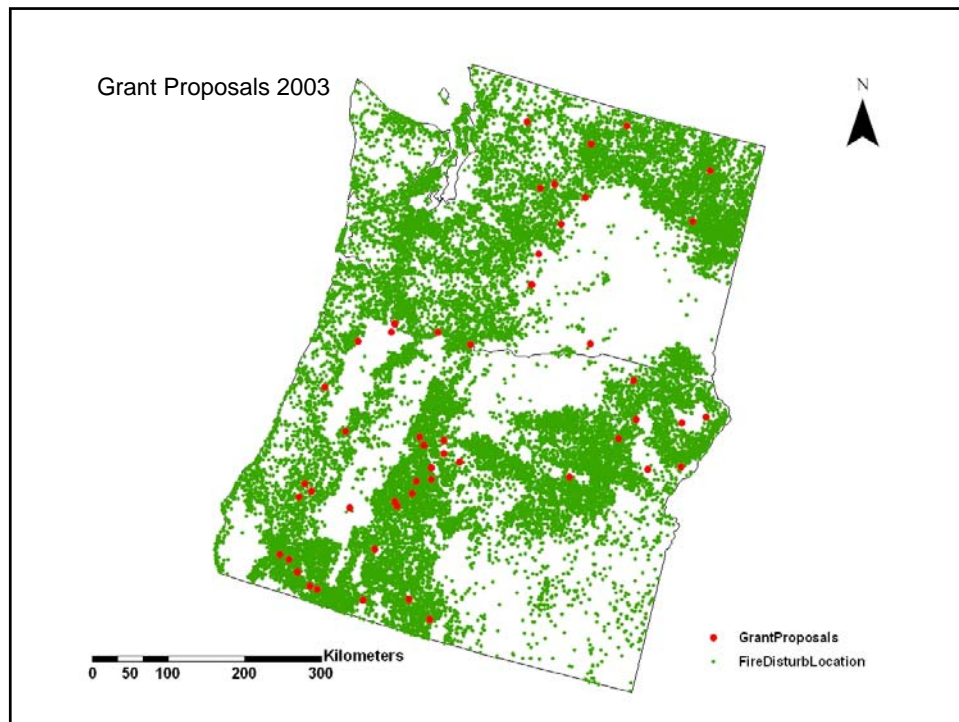
Where did we award money in
Washington in 2005 and 2006
and is it near Federal Lands
and where fires have
happened?







Can we use grant point data
for 2003 to show if awards
were near fire disturbances?



Limitations and Quality Statements

- There are many limitations to the current Geodatabase
- New layers should be defined and added
- Continue to improve past data accuracy and future data capture from applicants
- It is a vast improvement over previous methods of display and analysis

References

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- BLM. (2005c). *Program Fact Sheet: National Fire Plan, Wildland-Urban Interface Community Assistance Projects*. Retrieved Oct. 22, 2005, from <http://www.nwfireplan.gov/Documents/Program%20Fact%20Sheet.pdf>
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