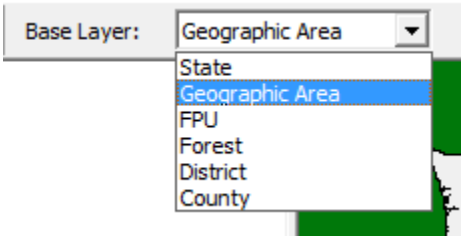
2018 WFIPS Tour

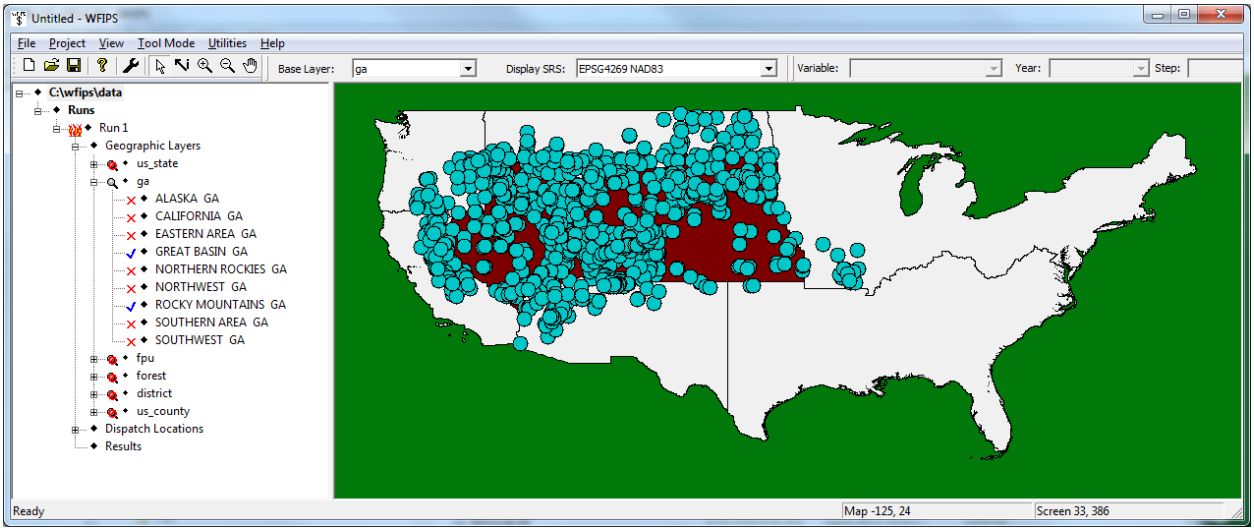
Quick Run

Open WFIPS.exe and select an analysis area type.



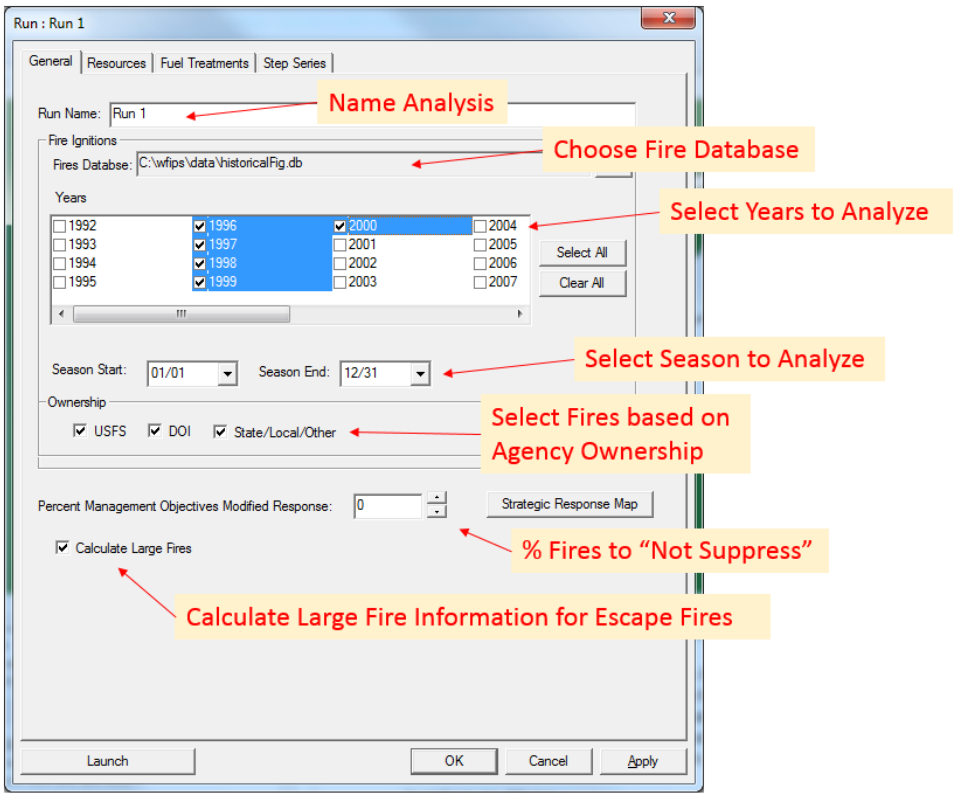
You can easily zoom into an area by using the select tool to draw a box around the desired area and selecting “Zoom To”

Select the analysis area or areas by either double clicking the area on the map or double clicking the area name in the menu under “Geographic Layers” and the name of the analysis area type.



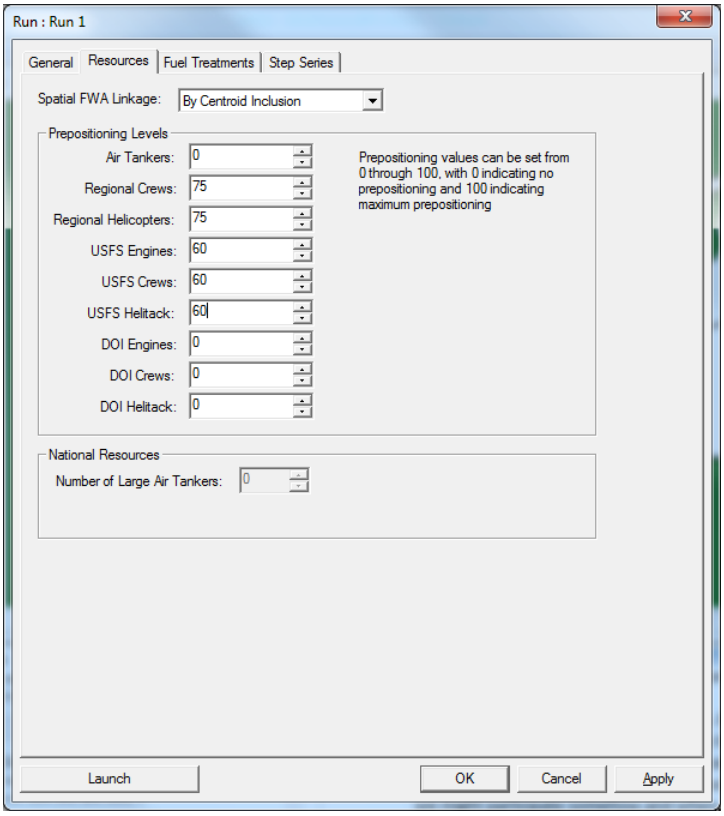
The map highlights the areas selected and shows all the dispatch locations that can respond to fires within the selected area. Areas can be deselected by double clicking on them. The dispatch location names are provided in the menu under “Dispatch Locations”. Information about the dispatch locations can be provided by right clicking on the name or the point and selecting the desired attribute. For example: “Properties” provides information about the resources located at the dispatch location. Selecting a dispatch location using the information tool will also produce a table listing the resources located at the dispatch location.

To set up the attributes for a WFIPS run double click on “Run 1” in the menu or right click on “Run 1” and select “Properties”. The “General” page sets up information regarding which fires will be analyzed.

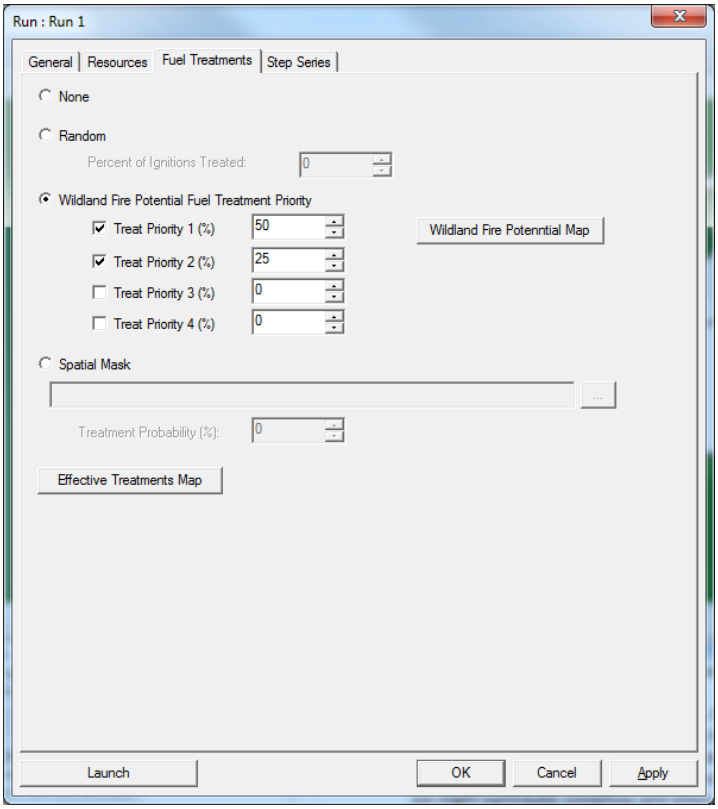


In WFIPS resources can be moved around the analysis area in respond to initial attack fire activity, they are prepositioned. The “Resource” page allows the user to indicate how mobile initial attack resources in the analysis are based on their agency and type. A zero indicates that the resources will not be moved, while 100 percent mobile indicates the resources will be placed at dispatch locations closest to the fire activity. Because dispatch locations located near low fire activity still have fires that need suppressing, a setting of 100 is not optimal. Values ranging from 60 – 80 usually improve suppression effectiveness.

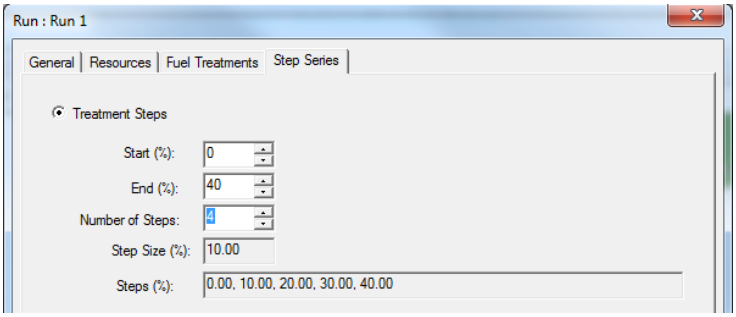
Currently large airtankers are not included in the initial attack module. When this function is operational the number of large airtankers to use in the analysis will be settable on the “Resource” page.



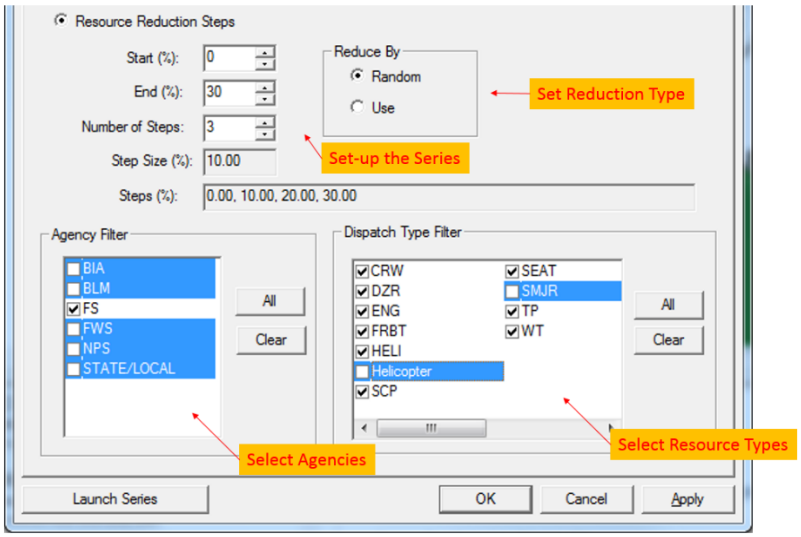
There are five ways to specify fuel treatments in WFIPS. The four of them listed on the "Fuel Treatments" page are applied all runs. A "Random" fuel treatment randomly treats the specified percent of fires in the analysis. The "Wildland Fire Potential Fuel Treatment Priority" treatment option allows fuel treatment percentages to be specified based on the Wildland Fire Potential map (which is viewable). The final treatment option on the "Fuel Treatments" page allows the uploading of an asci grid *.asc file that defines the regions where fuel treatments are allowed. The "Effective Treatments Map" button shows where WFIPS fuel treatments have a durable effect. The percentages are applied to all fires. If the fuel treatment for the fire is not durable the treatment does not change the fuel conditions for the fire. Hence the percentage of fires that are effectively treated will be lower than the entered percentage. Effective fuel treatment percentages are noted is the "Run Summary".



On the "Step Series" page fuel treatments can be applied at increasing increments so the results from the series of runs can be compared. The fuel treatments applied are randomly. Settings on the "General" and "Resources" pages, but not the "Fuel Treatments" page apply to all the runs in the fuel treatment series.



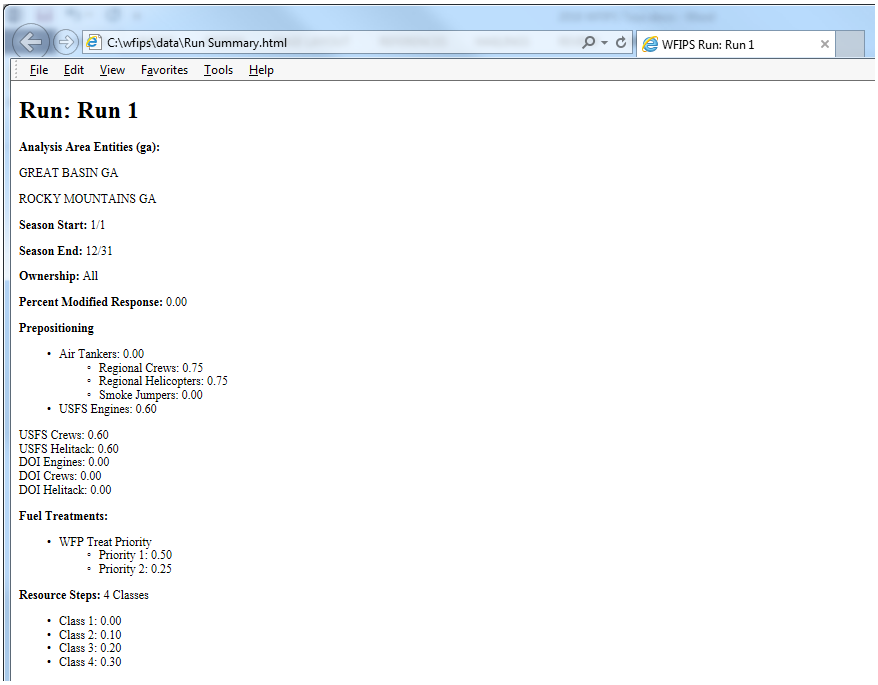
Alternately a series of runs can be made where the initial attack resources are reduced at increasing increments. All the selections on the previous pages apply to the Resource Reduction Steps. The Reductions can be applied randomly to the resources, or they can be applied based on the resources usage in previous steps. The Resource Reductions can also be applied only to resources from selected agencies and of selected types.



Select “Launch Series” button on the series page to run a reduction series or the “Launch” button on any other page to make a nonseries run.

Results

For a tabular view of the run results double click “Run Summary” under Results in the Menu. The summary provides information about the run setting



Run: Run 1

Analysis Area Entities (ga):

GREAT BASIN GA

ROCKY MOUNTAINS GA

Season Start: 1/1

Season End: 12/31

Ownership: All

Percent Modified Response: 0.00

Prepositioning

- Air Tankers: 0.00
  - Regional Crews: 0.75
  - Regional Helicopters: 0.75
  - Smoke Jumpers: 0.00
- USFS Engines: 0.60

USFS Crews: 0.60
USFS Helitack: 0.60
DOI Engines: 0.00
DOI Crews: 0.00
DOI Helitack: 0.00

Fuel Treatments:

- WFP Treat Priority
  - Priority 1: 0.50
  - Priority 2: 0.25

Resource Steps: 4 Classes

- Class 1: 0.00
- Class 2: 0.10
- Class 3: 0.20
- Class 4: 0.30

And detailed summary of the results.

Summaries

Step 1 (0 % Resource Reduction)

Year	Fires	Acres	Treat Acres	Non-Treat Acres	IRS Cost	No Resources Sent	Contained	TimeLimitExceeded	SizeLimitExceeded	Exhausted	Monitor	Percent Contained	Effective Treat Percent	Large Fires	LF Acres	LF Pop	LF Cost
1996	7,049	342,448.9	.0	342,448.9	$500,077.00	556	5,710	0	738	45	0	81	0	1,309	6,192,537	30,679	$1,397,475,352.06
1997	3,762	143,009.8	.0	143,009.8	$254,866.00	175	3,292	1	279	15	0	87	0	438	2,015,800	12,711	$472,210,755.10
1998	4,101	150,934.6	.0	150,934.6	$282,797.00	268	3,521	1	295	16	0	85	0	472	2,324,415	10,842	$526,885,275.15
1999	5,775	240,626.6	.0	240,626.6	$408,161.00	385	4,900	0	473	17	0	84	0	759	4,085,623	23,130	$881,251,419.97
2000	8,188	408,276.1	.0	408,276.1	$609,098.00	715	6,606	0	802	65	0	80	0	1,452	7,660,027	49,062	$1,710,182,482.33
Average	5,775	257,059.2	.0	257,059.2	$410,999.00	419	4,805	0	517	31	0	83	0	886	4,455,680	25,284	$997,601,056.92

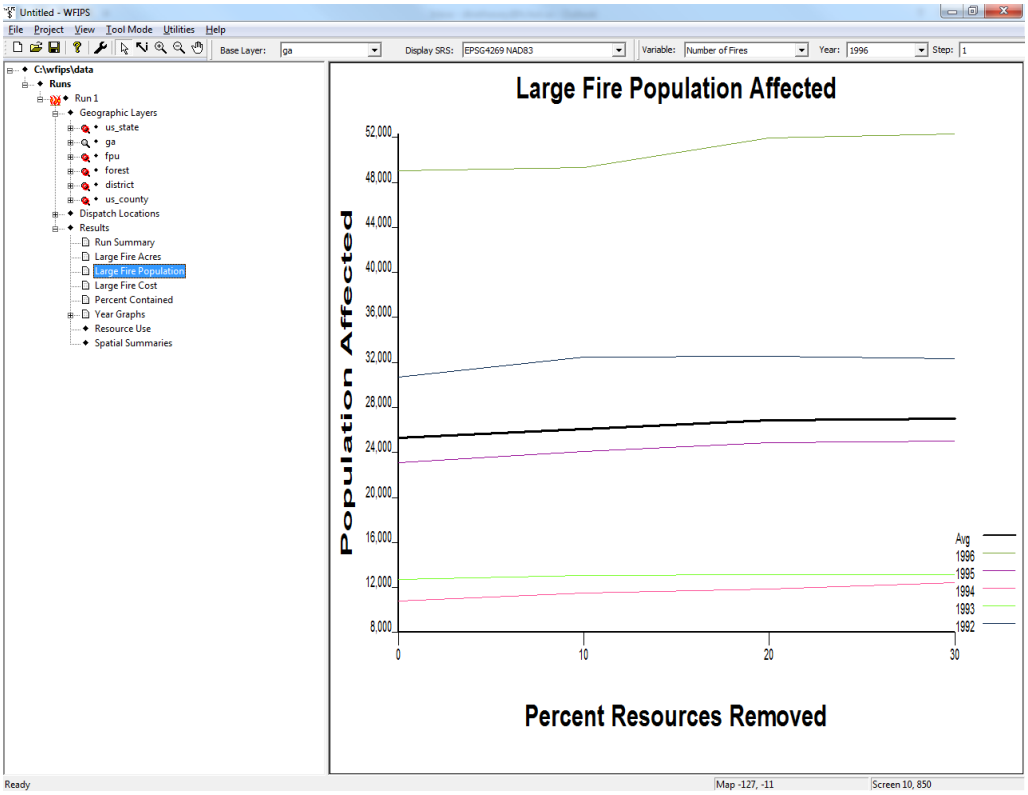
Step 2 (10 % Resource Reduction)

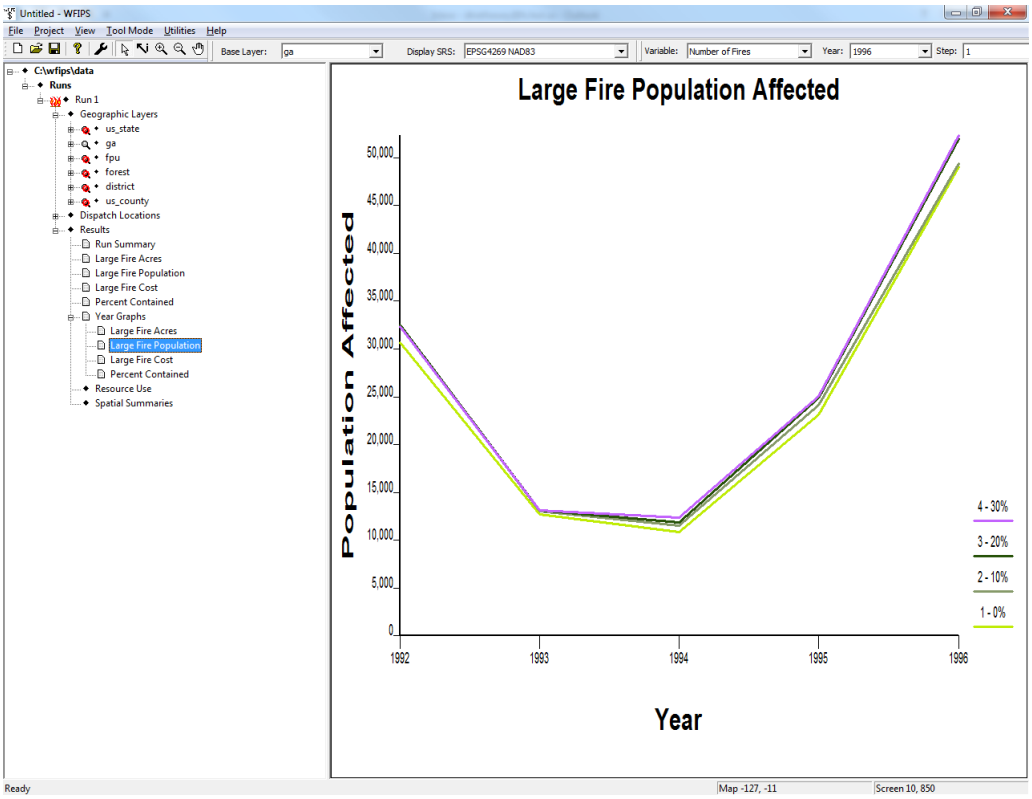
Year	Fires	Acres	Treat Acres	Non-Treat Acres	IRS Cost	No Resources Sent	Contained	TimeLimitExceeded	SizeLimitExceeded	Exhausted	Monitor	Percent Contained	Effective Treat Percent	Large Fires	LF Acres	LF Pop	LF Cost
1996	7,049	342,680.2	.0	342,680.2	$499,675.00	555	5,703	0	741	50	0	80	0	1,316	6,190,190	32,505	$1,404,683,111.58
1997	3,762	143,569.4	.0	143,569.4	$255,567.00	184	3,280	1	282	15	0	87	0	450	2,045,241	13,061	$485,127,120.51
1998	4,101	151,026.6	.0	151,026.6	$281,603.00	271	3,512	1	301	16	0	85	0	481	2,361,549	11,514	$537,533,752.40
1999	5,775	243,564.2	.0	243,564.2	$411,020.00	381	4,884	0	485	25	0	84	0	775	4,118,691	24,101	$887,652,839.02
2000	8,188	412,760.6	.0	412,760.6	$615,105.00	720	6,600	0	807	61	0	80	0	1,457	7,657,064	49,345	$1,713,426,535.68
Average	5,775	258,720.2	.0	258,720.2	$412,594.00	422	4,795	0	523	33	0	83	0	895	4,474,547	26,105	$1,005,684,671.84

Step 3 (20 % Resource Reduction)

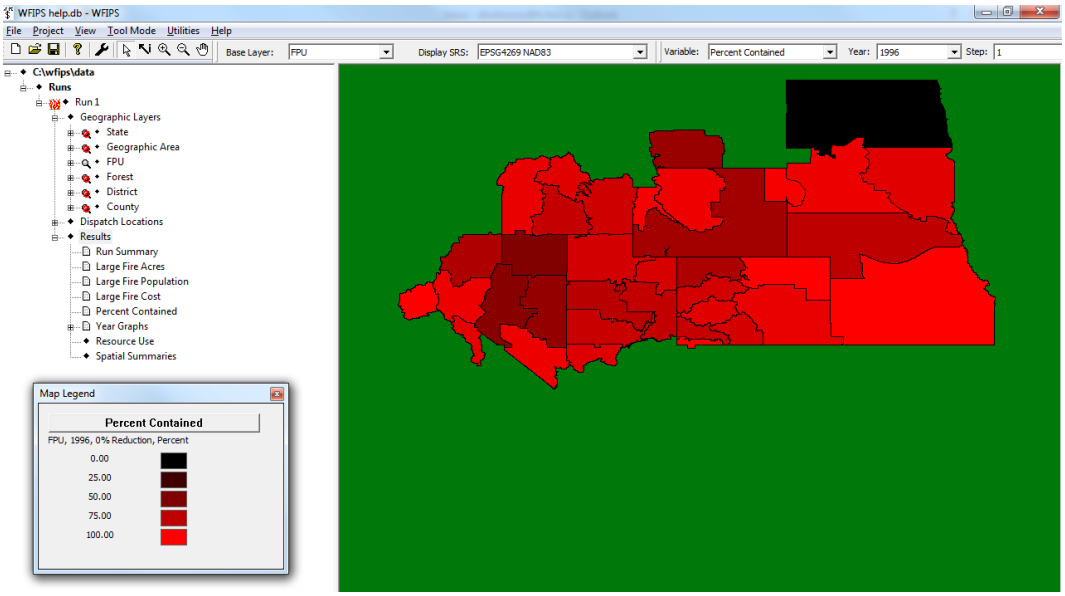
Year	Fires	Acres	Treat Acres	Non-Treat Acres	IRS Cost	No Resources Sent	Contained	TimeLimitExceeded	SizeLimitExceeded	Exhausted	Monitor	Percent Contained	Effective Treat Percent	Large Fires	LF Acres	LF Pop	LF Cost
1996	7,049	344,290.5	.0	344,290.5	$502,260.00	569	5,682	0	749	49	0	80	0	1,337	6,232,556	32,535	$1,410,568,531.12
1997	3,762	144,258.3	.0	144,258.3	$261,738.00	189	3,275	1	281	16	0	87	0	455	2,072,642	13,119	$493,865,515.11
1998	4,101	151,068.3	.0	151,068.3	$285,713.00	282	3,506	1	298	14	0	85	0	487	2,382,027	11,894	$545,381,066.16
1999	5,775	244,663.3	.0	244,663.3	$414,156.00	394	4,869	0	491	21	0	84	0	790	4,175,647	24,873	$902,907,673.46
2000	8,188	412,294.5	.0	412,294.5	$621,623.00	731	6,576	0	816	65	0	80	0	1,481	7,745,602	51,963	$1,737,577,305.60
Average	5,775	259,315.0	.0	259,315.0	$417,098.00	433	4,781	0	527	33	0	82	0	910	4,521,694	26,876	$1,018,060,018.29

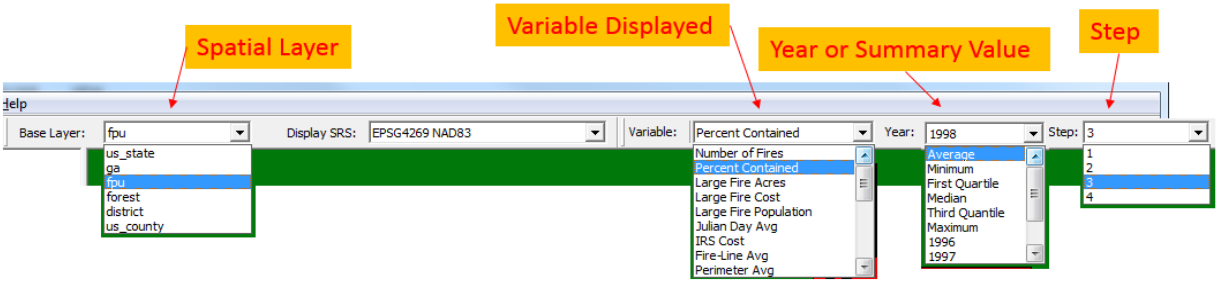
Graphs illustrate the resulting trends and yearly variation.



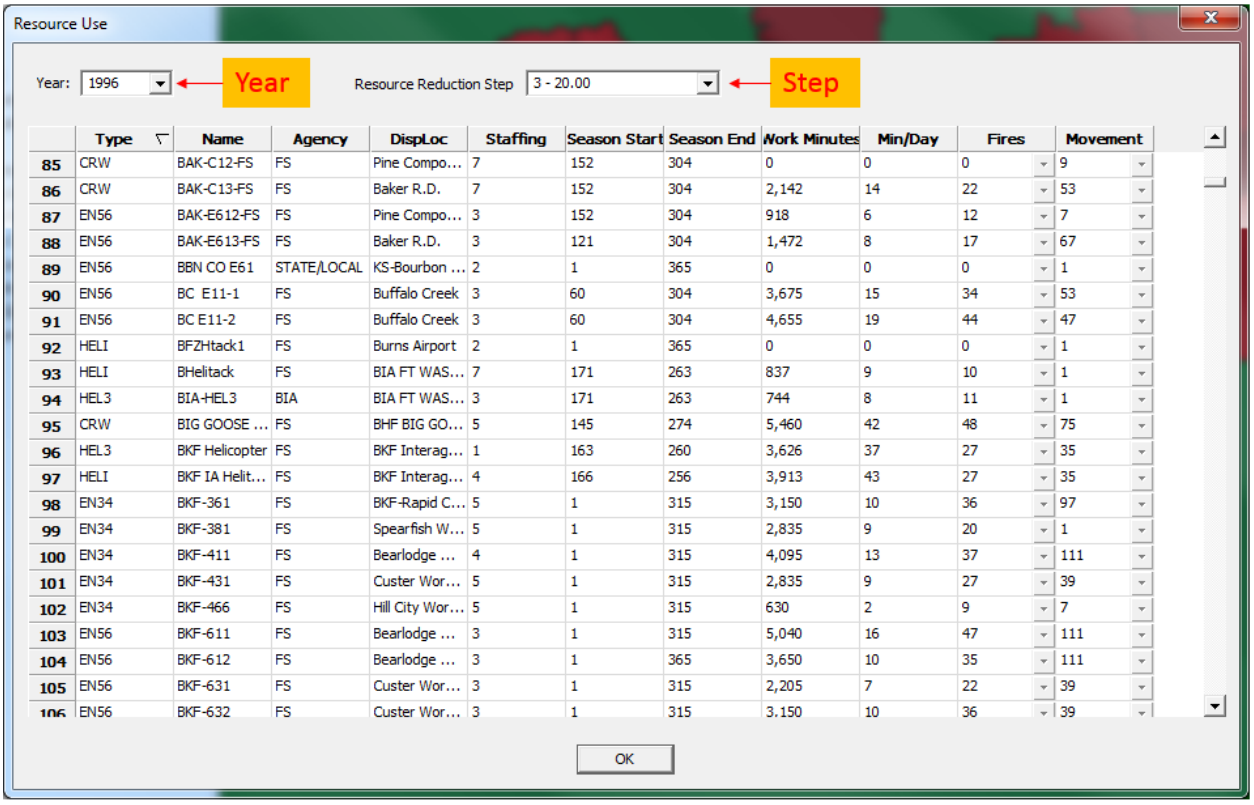


A variety of “spatial summaries” are available. The layer, variable, year, and step for these summaries can be set. Scroll through the different settings quickly using the up and down arrows.





Finally the usage of individual resources for each year and step in the analysis is viewable with “Resource Use” in the Results section of the Menu.

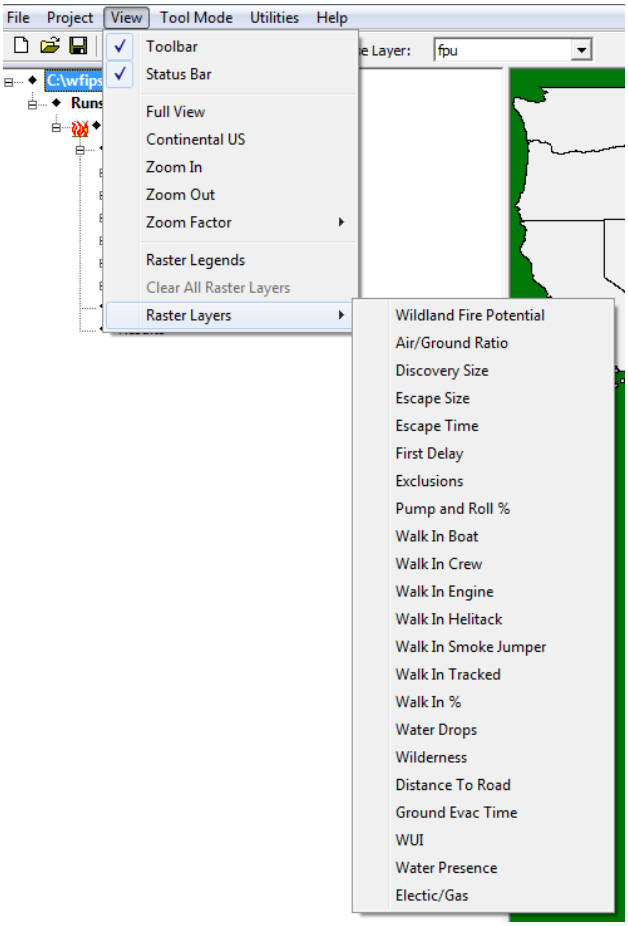


	Type	Name	Agency	DispLoc	Staffing	Season Start	Season End	Work Minutes	Min/Day	Fires	Movement
85	CRW	BAK-C12-FS	FS	Pine Compo...	7	152	304	0	0	0	9
86	CRW	BAK-C13-FS	FS	Baker R.D.	7	152	304	2,142	14	22	53
87	EN56	BAK-E612-FS	FS	Pine Compo...	3	152	304	918	6	12	7
88	EN56	BAK-E613-FS	FS	Baker R.D.	3	121	304	1,472	8	17	67
89	EN56	BBN CO E61	STATE/LOCAL	KS-Bourbon ...	2	1	365	0	0	0	1
90	EN56	BC E11-1	FS	Buffalo Creek	3	60	304	3,675	15	34	53
91	EN56	BC E11-2	FS	Buffalo Creek	3	60	304	4,655	19	44	47
92	HELI	BFZHtack1	FS	Burns Airport	2	1	365	0	0	0	1
93	HELI	BHelitack	FS	BIA FT WAS...	7	171	263	837	9	10	1
94	HEL3	BIA-HEL3	BIA	BIA FT WAS...	3	171	263	744	8	11	1
95	CRW	BIG GOOSE ...	FS	BHF BIG GO...	5	145	274	5,460	42	48	75
96	HEL3	BKF Helicopter	FS	BKF Interag...	1	163	260	3,626	37	27	35
97	HELI	BKF IA Helit...	FS	BKF Interag...	4	166	256	3,913	43	27	35
98	EN34	BKF-361	FS	BKF-Rapid C...	5	1	315	3,150	10	36	97
99	EN34	BKF-381	FS	Spearfish W...	5	1	315	2,835	9	20	1
100	EN34	BKF-411	FS	Bearlodge ...	4	1	315	4,095	13	37	111
101	EN34	BKF-431	FS	Custer Wor...	5	1	315	2,835	9	27	39
102	EN34	BKF-466	FS	Hill City Wor...	5	1	315	630	2	9	7
103	EN56	BKF-611	FS	Bearlodge ...	3	1	315	5,040	16	47	111
104	EN56	BKF-612	FS	Bearlodge ...	3	1	365	3,650	10	35	111
105	EN56	BKF-631	FS	Custer Wor...	3	1	315	2,205	7	22	39
106	EN56	BKF-632	FS	Custer Wor...	3	1	315	3,150	10	36	39

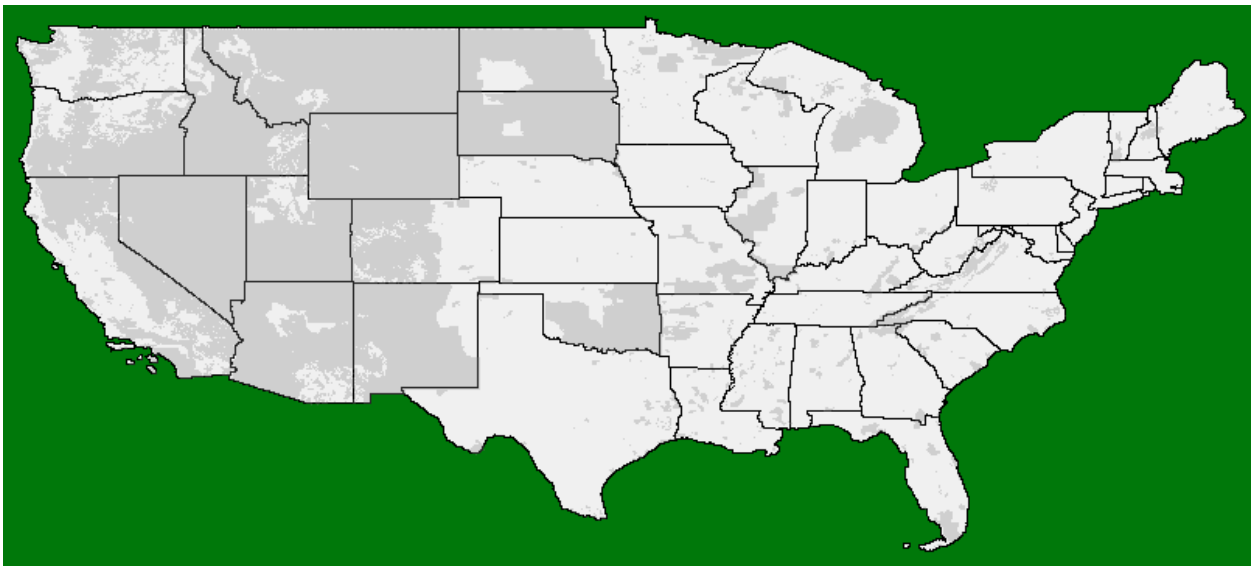
Save the run and results with “Save” in the “File” menu. The run can be reloaded with “Open” in the “File” menu.

Viewing WFIPS Information

The spatial information used in the Initial Attack Module of WFIPS can be viewed by selecting a layer from the “Raster Layers” menu located in “View” menu item. The layers between “Air/Ground Ratio” and “Water Drops” were obtained from FPA’s FWA data. The layers “Distance To Road” thru “Electric/Gas” are used for dispatching resources to fires. Multiple layers can be viewed simultaneously and the colors for individual layers can be changed using “Raster Legends” located under “View”.

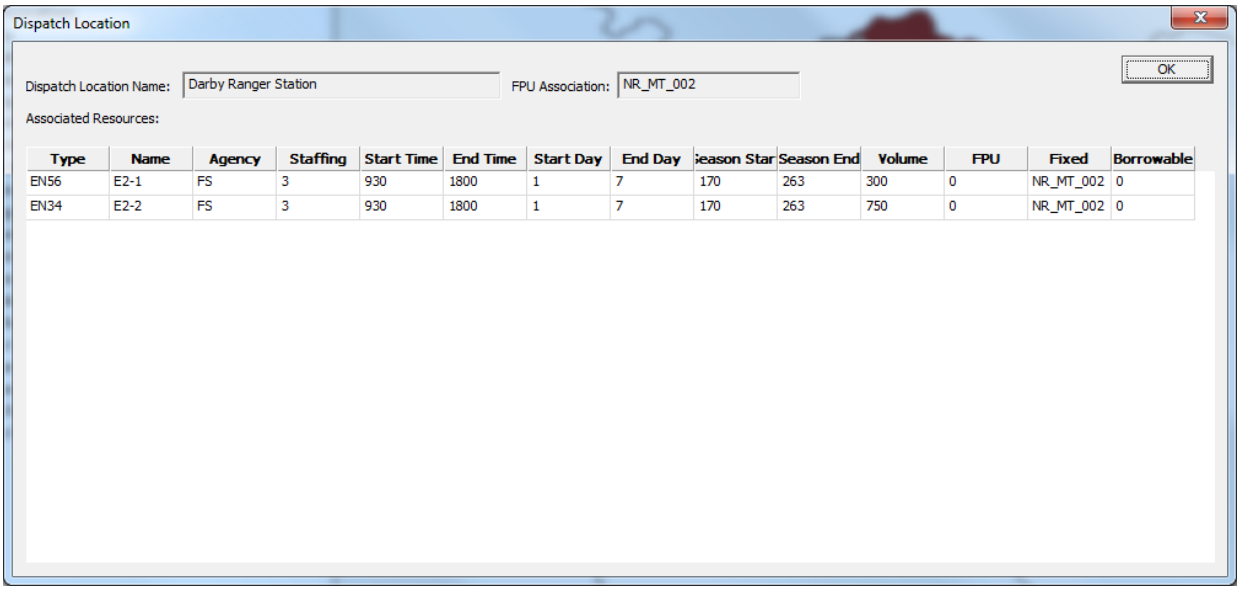


For Example the “Exclusions” Layer shows the areas that are included/excluded in WFIPS analyses.



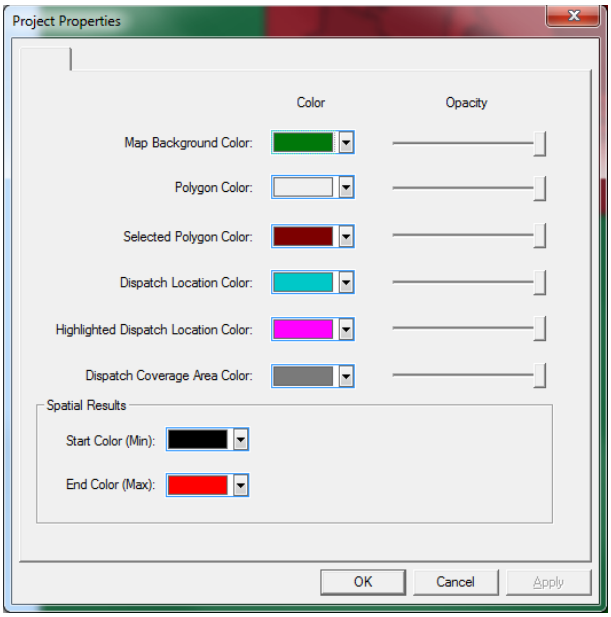
Information about individual dispatch locations can be viewed by right clicking on the dispatch location's name in the menu or on the point in the map. The "Coverage Area" is the spatial location where the resources located at the dispatch location can respond to fires.

"Properties" lists detailed information about the resources located at the dispatch location.



Type	Name	Agency	Staffing	Start Time	End Time	Start Day	End Day	Season Star	Season End	Volume	FPU	Fixed	Borrowable
EN56	E2-1	FS	3	930	1800	1	7	170	263	300	0	NR_MT_002	0
EN34	E2-2	FS	3	930	1800	1	7	170	263	750	0	NR_MT_002	0

The colors and opacity for the WFIPS background map and WFIPS spatial results can be adjusted by selecting “Properties” under the “Project” menu item. When viewing multiple layers of information on a map it is often necessary to adjust the colors. The Project Properties window can also be brought up by clicking the button on the “Map Legend” window.



Right clicking on an area within the “Spatial Summaries” map brings up a table of the results for that area. The year and step can be changed in the “Object Results” dialog.