

**The FASTCLUS Procedure**  
**Replace=FULL Radius=0 Maxclusters=15 Maxiter=1**

Initial Seeds		
Cluster	VALP	HINCP
1	2267000.000	1019000.000
2	700000.000	12400.000
3	120000.000	1425000.000
4	400000.000	505600.000
5	800000.000	380000.000
6	340000.000	1027000.000
7	316000.000	11500.000
8	470.000	217030.000
9	1150000.000	129000.000
10	1100000.000	712000.000
11	675000.000	821000.000
12	2267000.000	509000.000
13	950000.000	1106000.000
14	350.000	606000.000
15	2267000.000	-5100.000

Criterion Based on Final Seeds =	55663.5
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Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	25	77688.6	210060		12	399007
2	4961	75373.4	233784		4	293776
3	132	75207.7	231814		6	610945
4	1034	95813.7	242681		7	273444
5	516	97752.1	231201		9	299705
6	35	85043.7	247637		11	341408
7	14141	60409.4	238014		8	164052
8	20559	41030.2	242462		7	164052
9	1628	58518.6	251160		5	299705
10	101	76870.5	294561		5	326946
11	97	89124.3	221751		5	327236
12	179	74833.9	235706		1	399007
13	15	106266	242337		11	407935

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Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
14	231	86788.7	256317		4	313756
15	6563	14407.4	237537		12	476061

**7989 Observation(s) were omitted due to missing values.**

Statistics for Variables				
Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
VALP	253558	58637	0.946541	17.705900
HINCP	86804	45990	0.719379	2.563525
OVER-ALL	177923	51744	0.915451	10.827425

Pseudo F Statistic =	38825.60
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Approximate Expected Over-All R-Squared =	0.95917
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Cubic Clustering Criterion =	-171.258
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**WARNING: The two values above are invalid for correlated variables.**

Cluster Means		
Cluster	VALP	HINCP
1	2267000.000	891455.842
2	557120.397	60538.624
3	148287.879	1365333.333
4	406811.047	312949.682
5	735375.315	319932.539
6	337714.286	784496.667
7	245965.952	91815.092
8	85229.218	58998.756
9	962717.489	124641.362
10	979734.043	537148.000
11	644276.596	634232.760
12	2267000.000	492448.955
13	864333.333	977724.000
14	135975.882	471352.096
15	2267000.000	16387.648

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Cluster Standard Deviations		
Cluster	VALP	HINCP
1	0.0000	109868.2452
2	97441.2379	43214.5595
3	25140.6821	103345.6982
4	84813.2435	105675.2254
5	94653.9294	100755.0778
6	43073.5154	112292.1435
7	68107.6297	51574.5146
8	42991.0833	38970.7638
9	71805.7691	41143.4789
10	74058.1253	79583.5796
11	93062.5185	85003.7427
12	0.0000	105831.1795
13	122224.4228	87442.1074
14	72181.6685	99269.1171
15	0.0000	20375.1867

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Distance Between Cluster Centroids								
Nearest Cluster	1	2	3	4	5	6	7	8
1	.	1901081.714	2171059.863	1948068.869	1634782.268	1932248.336	2173477.387	2335189.188
2	1901081.714	.	1367345.334	293775.838	314738.016	756474.910	312722.410	471893.691
3	2171059.863	1367345.334	.	1083672.265	1198972.259	610944.840	1277258.673	1307855.658
4	1948068.869	293775.838	1083672.265	.	328638.462	476582.543	273444.055	409763.279
5	1634782.268	314738.016	1198972.259	328638.462	.	611517.884	539962.123	700554.342
6	1932248.336	756474.910	610944.840	476582.543	611517.884	.	698731.365	768177.016
7	2173477.387	312722.410	1277258.673	273444.055	539962.123	698731.365	.	164052.460
8	2335189.188	471893.691	1307855.658	409763.279	700554.342	768177.016	164052.460	.
9	1512996.139	410631.419	1484119.994	586934.405	299705.035	908866.342	717502.842	879940.121
10	1335135.833	636991.987	1173538.951	615228.124	326946.088	688019.426	858333.857	1014280.819
11	1642983.555	580276.800	883466.386	399515.586	327236.315	341408.394	672954.899	802139.720
12	399006.887	1763585.777	2291477.294	1868829.294	1541309.862	1951265.034	2060360.676	2224410.668
13	1405317.036	967268.733	814224.839	807001.571	670313.193	560949.573	1080376.236	1204599.226
14	2172038.431	588328.489	894066.014	313756.292	618229.377	372502.222	395153.329	415464.200
15	875068.194	1710449.522	2511691.763	1883680.435	1561413.999	2076568.042	2022441.080	2182186.851

Distance Between Cluster Centroids							
Nearest Cluster	9	10	11	12	13	14	15
1	1512996.139	1335135.833	1642983.555	399006.887	1405317.036	2172038.431	875068.194
2	410631.419	636991.987	580276.800	1763585.777	967268.733	588328.489	1710449.522
3	1484119.994	1173538.951	883466.386	2291477.294	814224.839	894066.014	2511691.763
4	586934.405	615228.124	399515.586	1868829.294	807001.571	313756.292	1883680.435
5	299705.035	326946.088	327236.315	1541309.862	670313.193	618229.377	1561413.999
6	908866.342	688019.426	341408.394	1951265.034	560949.573	372502.222	2076568.042
7	717502.842	858333.857	672954.899	2060360.676	1080376.236	395153.329	2022441.080
8	879940.121	1014280.819	802139.720	2224410.668	1204599.226	415464.200	2182186.851
9	.	412857.469	600905.979	1355151.392	858737.113	896498.755	1308767.258
10	412857.469	.	349223.638	1288041.789	455438.838	846319.640	1388612.613
11	600905.979	349223.638	.	1628905.735	407935.288	533759.989	1736365.120
12	1355151.392	1288041.789	1628905.735	.	1484239.080	2131128.543	476061.307
13	858737.113	455438.838	407935.288	1484239.080	.	887083.469	1700482.684
14	896498.755	846319.640	533759.989	2131128.543	887083.469	.	2179049.435
15	1308767.258	1388612.613	1736365.120	476061.307	1700482.684	2179049.435	.

