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Re: OPL – Second Errata for Roger L. Olsen

Dear Leslie and Robert:

Enclosed with this letter are the following:

(1) Second Errata for Expert Report of Dr. Roger L. Olsen (September 24, 2008). Most of the corrections contained in the Second Errata were discussed in Dr. Olsen's deposition. The only exceptions are the minor changes to Figures 6.11-22a and 6.11-22b of his Expert Report. The modified figures are attached to the Errata. The changes were made to correct errors in the number of samples stated for some of the sample types and the median and upper quartile for the category – "USGS Stations – High Flow."

(2) 2nd Errata for Dr. G. D. Cook (September 26, 2008). This second errata simply shows the minor effects of Wells' Second Errata (which is a revision of his model due to the corrections made in Engle's Model) had on the Cooke/Welch Expert Report.

(3) Second Errata for Expert Report of Dr. R. Jan Stevenson (September 26, 2008). The Second Errata was necessary because Dr. Engel reran his Model due to the errors he disclosed and corrected in his Errata. Again, we do not believe these errata make significant changes to Dr. Stevenson's opinions or conclusions.

(4) Errata for Expert Report of Dr. Wells (September 22, 2008). This Second Errata was necessitated because Dr. Engel reran his model due to errors he discovered and corrected in his Errata. You will note that these errata did not alter any conclusions or opinions of Dr. Wells' in his Report.

If you have any questions, please call.

Very truly yours,

David P. Page

DPP/sdk

Enclosure

In the matter of

State of Oklaholma, ex rel., A. Drew Edmondson in his capacity as Attorney General of the State of Oklahoma, and Oklahoma Secretary of the Environment, C. Miles Tolbert, in his capacity as the Trustee for Natural Resources for the State of Oklahoma, Plaintiffs

v.

Tyson Foods, Tyson Poultry, Tyson Chicken, Inc., Cobb-Vantress, Inc., Aviagen, Inc., Cal-Maine Foods, Cal-Maine Farms, Inc., Cargill, Inc., Cargill Turkey Products, LLC, Georges, Inc., George's Farms, Inc., Peterson Farms, Inc., Simmons Foods, Inc., and Willowbrook Foods, Inc.
Defendants.

CASE NO. 05-CV-329-GFK-SAJ

in the United States District Court
for the Northern District of Oklahoma

Second Errata for Export Report

of

Roger L. Olsen, Ph.D.
CDM
555 17th Street, Suite 1100
Denver, CO 80202

Prepared by:

Roger L. Olsen

Roger L. Olsen

September 24, 2008

Errata of September 24, 2008

1. During by Deposition on September 10-11, 2008, I provided hand edited corrections to page 6-60 of my Expert Report (Exhibit 7 to my deposition). These changes corrected minor sample counting errors (and percentages based on those sample counts) and corrected the placement of WWTP discharges and reference samples in wrong sample categories. The "Note" on the table on page 6-60 was corrected to state that reference samples are "excluded" rather than "included" in the "streams" category. I have attached a typed corrected page that shows the hand edited changes provided at my deposition.

2. The changes on page 6-60 of my Report resulted in some minor changes in the number of samples referenced on Figures 6.11-22a and 6.11-22b of my Report. When checking the sample numbers on the Figures, a spreadsheet error was also found for the median and upper quartile for "USGS Stations – Highflow" on these two Figures. These corrections were not discussed at my deposition. I have attached the two new corrected Figures.

3. During my deposition I also provided and discussed Exhibit 11 to my deposition which lists Principal Component Analysis ("PCA") sample scores on Appendix F of my Report (SW 3 Principal Component Scores). During my deposition there was some confusion as to whether the hard copy of Appendix F to my Report included all of the PCA scores. (These PCA sample scores were contained in Appendix F of the electronic copy of my .pdf Report and in electronic spreadsheets provided to Defendants as part of my relied upon materials.) I have attached the correct version of that portion of Appendix F which was also provided as Exhibit 11 in my deposition. (SW3 Principal Component Scores)

samples below about a score of 4.8 are typically not in locations downgradient of WWTP discharges so cannot be impacted by WWTPs. For the "poultry waste dominant impact" group, a PC1 score of greater than 1.3 was selected. This is a conservatively high value and could have been set lower to include more samples. The value was selected by examining the locations and scores of samples, particularly the scores of reference samples and samples in low poultry density areas. In summary, the samples with PC1 scores below approximately 1.3 include all samples from reference locations (six total), 9 out of 10 samples from HFS30 (small watershed location with low poultry house density) and 10 out of 11 samples from HFS28A (small watershed location with low poultry house density). The one sample from HFS30 and the one sample from HFS28A with higher PC1 scores were collected during extreme flow events. Over all, ~~441~~ 437 of the ~~573~~ 570 samples (77%) had PC1 scores higher 1.3 and show some poultry contamination.

Figure 6.11-23 shows the average PC1 scores by location (based on PCA run SW3). The average PC1 score was determined if multiple samples were collected and contained in the PCA analyses by calculating the mean score of those samples. In **Figure 6.11-23**, there are ~~175~~ 172 different locations. Of these, ~~137~~ 134 have a PC1 average scores greater than 1.3. Therefore, approximately 78 percent of the locations sampled in the IRW show some poultry contamination. Locations with ~~PC2~~ **PC1** scores higher than 1.3 are shown in red; those with scores less than 1.3 are shown in green.

The following table gives a breakdown of the number of samples with poultry contamination by the various sample types (based on run SW3):

Sample Type	Sample Counts	Percent > 1.3
EOF	65/65	100
Lake Tenkiller	29/29	100
Steam – base flow	~~56/90~~ 53/84	~~62~~ 63
Stream -high flow	13/20	65
Small Trib-base flow	~~32~~ 31/48	67
Small Trib-high flow	~~158~~ 155/177	~~89~~ 88
USGS – base flow	~~32/48~~ 33/60	~~67~~ 55
USGS – high flow	~~60~~ 58/81	~~74~~ 72

Note: the three WWTP discharges samples are not included because they are actual source samples; reference samples are ~~included~~ **excluded** in the "streams" group.

Evaluation of Groundwater and Spring Samples

Figures 6.11-19a and 6.11-19b show the PC1 score vs PC2 score plot for PCA run SW17. This run is the same as SW3 except groundwater samples (geoprobe and existing wells) and springs samples are included in the PCA. This results in 699 total samples in the PCA. The results of this run are provided graphically and include:

- **Figures 6.11-3** and **6.11-4**: Scree Plots and Variance Analysis
- **Figures 6.11-12** and **6.11-13**: PC Parameters, Loadings and Coefficients

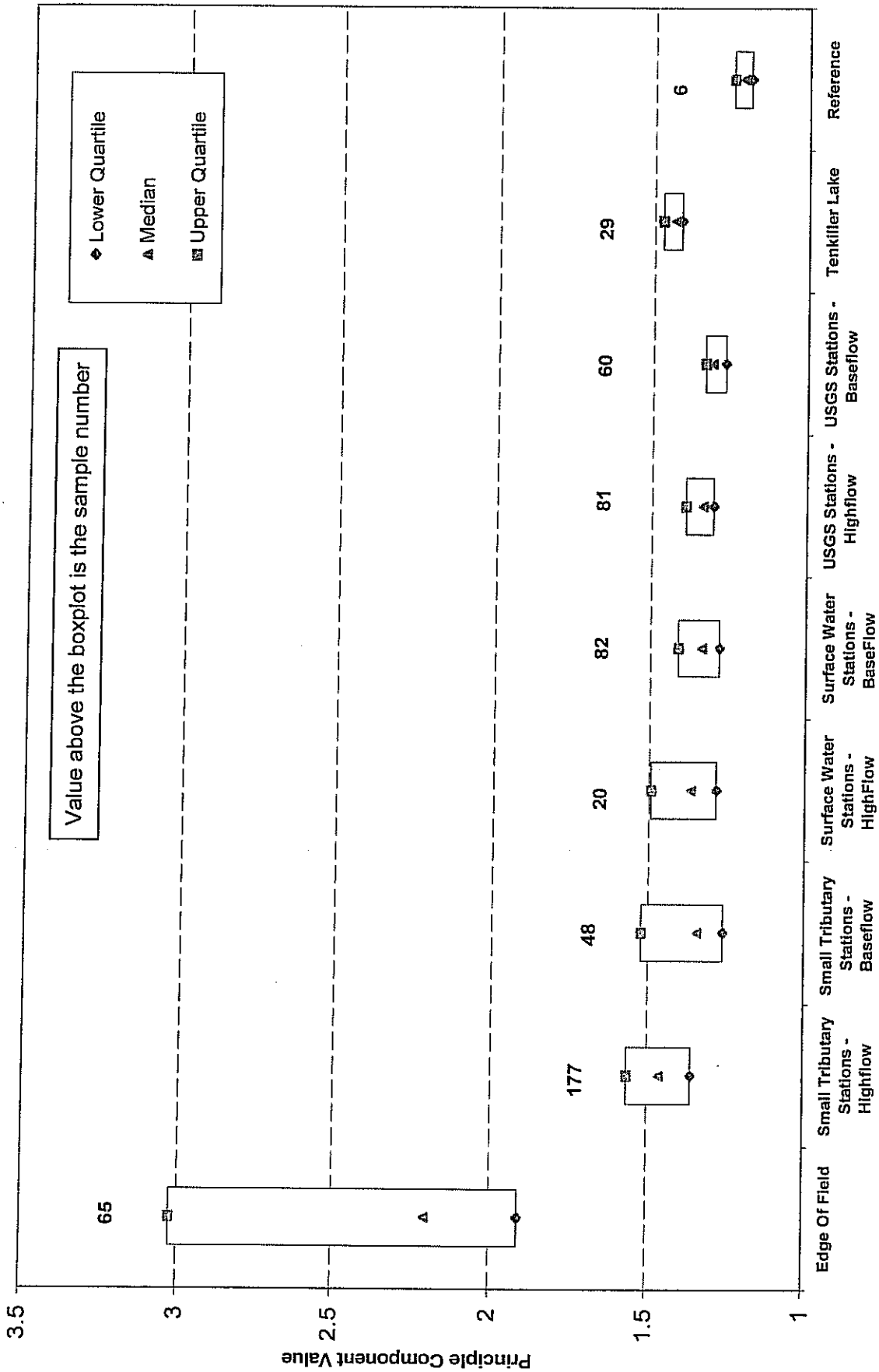

Figure 6.11-22a
Comparison Between Surface Water Environmental Components – Principal Component Value

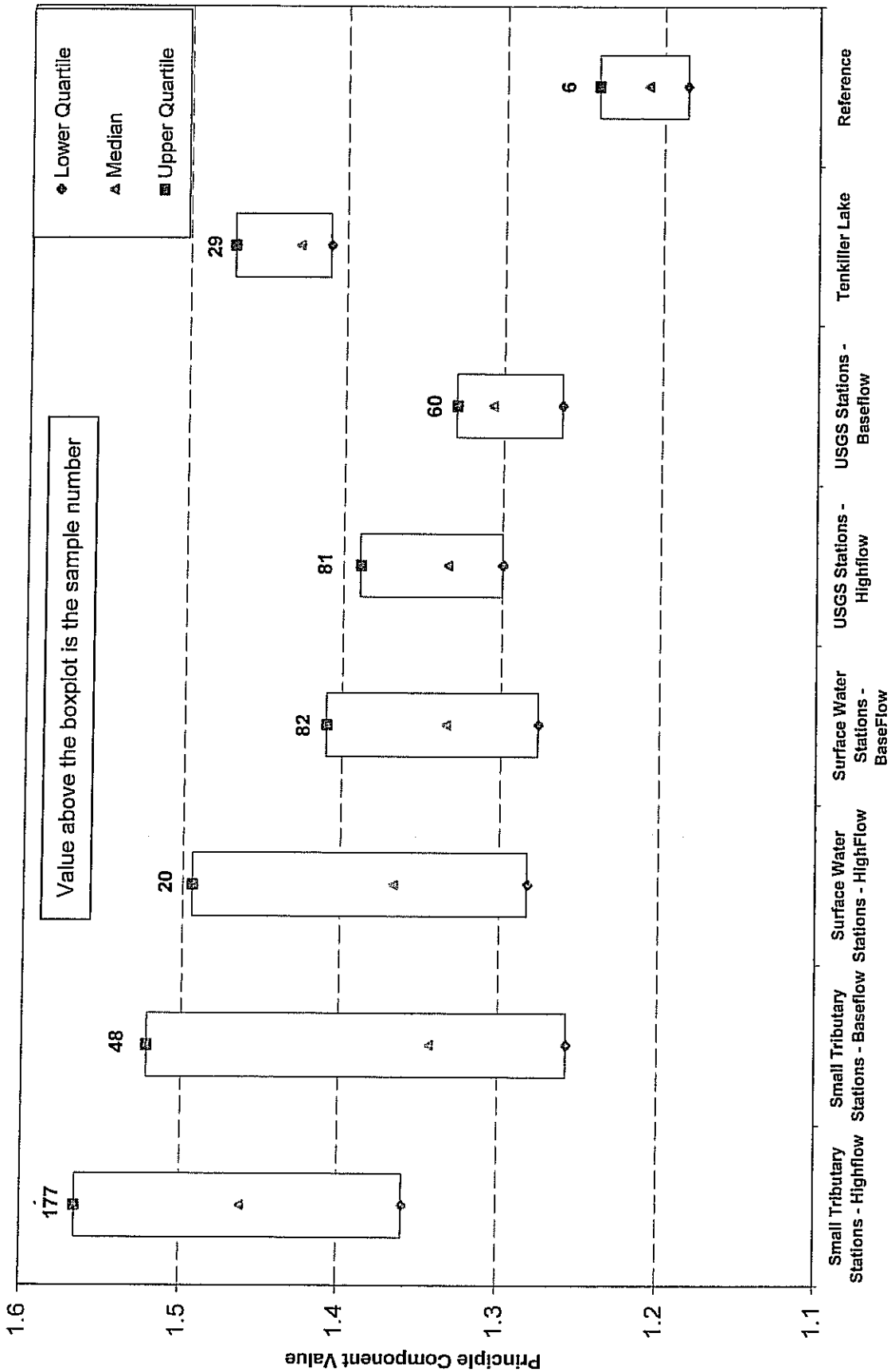

Figure 6.11-22b
Comparison Between Surface Water Environmental Components -- Principal Component Value

REFERENCED PORTION OF
APPENDIX "F"

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
BS-08:8/23/2005:SW:S:-:-	1.250550823	3.477634273
BS-117:9/14/2005:SW:S:-:-	1.414573122	3.764278044
BS-208:5/1/2007:SW:S:0:-	1.270665119	3.373011272
BS-208:9/1/2005:SW:S:-:-	1.284249698	3.329378531
BS-28:8/23/2005:SW:S:-:-	1.261548252	3.704530734
BS-35:5/2/2007:SW:S:0:-	1.312733852	3.84632648
BS-35:9/22/2005:SW:S:-:-	1.439054735	3.805063816
BS-62A:5/1/2007:SW:S:0:-	1.323515512	3.862751306
BS-68:5/2/2007:SW:S:0:-	1.278654876	3.932146458
BS-HF04:5/1/2007:SW:S:0:-	1.53732086	5.742400788
BS-HF22:5/2/2007:SW:S:0:-	1.520505413	4.84350674
BS-HF22:8/24/2005:SW:S:-:-	1.529819301	4.947181648
BS-REF1:8/30/2005:SW:S:-:-	1.183474275	3.687816252
BS-REF2:8/31/2005:SW:S:-:-	1	4.373653793
BS-REF3:9/1/2005:SW:S:-:-	1.187813805	3.636668553
EOF01:5/23/2005:SW:S:-:-	4.481896456	2.108545387
EOF02:5/23/2005:SW:S:-:-	5.937014796	1.144422819
EOF07:5/15/2005:SW:S:-:-	6.612202603	3.874531425
EOF07:5/23/2005:SW:S:-:-	1.945726284	3.601039581
EOF07:6/5/2005:SW:S:-:-	2.091814813	4.152918012
EOF07-222:4/13/2007:SW:S:-:-	2.78744945	3.465840138
EOF07-230:4/24/2007:SW:S:-:-	1.918699699	3.862713618
EOF07-232:4/24/2007:SW:S:-:-	2.49653787	2.595168727
EOF07-259:4/13/2007:SW:S:-:-	2.952371881	2.662986961
EOF07-LOR#1:4/24/2007:SW:S:-:-	2.509468844	3.28897824
EOF08:5/23/2005:SW:S:-:-	1.736773789	3.873916785
EOF09:6/5/2005:SW:S:-:-	2.135544841	3.842422941
EOF11:6/5/2005:SW:S:-:-	2.551557013	3.779411977
EOF14:6/2/2005:SW:S:-:-	6.145276346	6.002649701
EOF15:6/2/2005:SW:S:-:-	2.069546792	2.688660869
EOF16:6/5/2005:SW:S:-:-	2.454128968	2.846297257
EOF17:6/5/2005:SW:S:-:-	2.446176346	2.765266904
EOF18:6/5/2005:SW:S:-:-	1.706062701	3.511006563
EOF19:6/5/2005:SW:S:-:-	1.776784502	3.169029903
EOF20:6/5/2005:SW:S:-:-	3.904735081	3.15902428
EOF21:6/5/2005:SW:S:-:-	2.007155598	4.469450634
EOF22:6/5/2005:SW:S:-:-	2.190023972	5.629438135
EOF23:6/5/2005:SW:S:-:-	1.808203828	2.654380318
EOF24:6/5/2005:SW:S:-:-	2.525159574	2.573795906
EOF25:6/5/2005:SW:S:-:-	2.002075867	2.858655492
EOF26:6/5/2005:SW:S:-:-	2.092355266	4.309024432
EOF27:6/5/2005:SW:S:-:-	3.253662865	2.687218929
EOF28:6/5/2005:SW:S:-:-	2.221263365	3.722060495
EOF29:6/5/2005:SW:S:-:-	5.783947068	1
EOF30:6/5/2005:SW:S:-:-	2.713108888	2.426196774
EOF-CP-1A:3/31/2008:SW:S:-:-	1.679097667	2.869676421
EOF-CP-1B:3/31/2008:SW:S:-:-	2.106906072	3.184259887
EOF-EOF1:6/17/2006:SW:S:-:-	2.204345055	2.739665504
EOF-GF1:3/9/2006:SW:S:-:-	1.939045166	3.169574649
EOF-SPREAD002:4/25/2006:SW:S:-:-	2.2095379	3.836272046
EOF-SPREAD007:4/25/2006:SW:S:-:-	2.394431052	2.616458793
EOF-SPREAD007:5/4/2006:SW:S:-:-	2.091759007	3.285650451
EOF-SPREAD010:5/9/2006:SW:S:-:-	6.229207216	5.873284868

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
EOF-SPREAD017A:5/1/2006:SW:S:-:-	6.91060472	4.818341432
EOF-SPREAD023:4/25/2006:SW:S:-:-	8.09832248	9.46648848
EOF-SPREAD023:6/18/2006:SW:S:-:-	6.679299313	9.080000352
EOF-SPREAD025:5/4/2006:SW:S:-:-	1.641088154	2.859751599
EOF-SPREAD025:6/18/2006:SW:S:-:-	1.38230919	4.056030015
EOF-SPREAD026:4/25/2006:SW:S:-:-	2.616481402	2.477823617
EOF-SPREAD026:4/29/2006:SW:S:-:-	2.011916777	2.629776319
EOF-SPREAD029:4/25/2006:SW:S:-:-	3.025116773	3.043018577
EOF-SPREAD030:3/31/2006:SW:S:-:-	1.894301731	4.340447168
EOF-SPREAD031:4/7/2006:SW:S:-:-	1.648552224	4.210784159
EOF-SPREAD036:4/25/2006:SW:S:-:-	3.304544241	5.278431521
EOF-SPREAD044:6/18/2006:SW:S:-:-	1.446328614	4.256251603
EOF-SPREAD048:5/9/2006:SW:S:-:-	2.46492386	3.388649839
EOF-SPREAD052:4/25/2006:SW:S:-:-	1.910932451	3.446461626
EOF-SPREAD053B:5/4/2006:SW:S:-:-	1.942372068	4.000098313
EOF-SPREAD053E:4/29/2006:SW:S:-:-	7.649040929	9.63415979
EOF-SPREAD053G:5/4/2006:SW:S:-:-	2.29262301	3.360425237
EOF-SPREAD059:4/29/2006:SW:S:-:-	1.583490855	3.489051493
EOF-SPREAD060:4/29/2006:SW:S:-:-	6.896630826	9.337553071
EOF-SPREAD064:5/4/2006:SW:S:-:-	5.666585303	4.139487357
EOF-SPREAD065:5/4/2006:SW:S:-:-	1.736666117	3.315800696
EOF-SPREAD068:6/18/2006:SW:S:-:-	1.689167042	3.73133424
EOF-SPREAD071:5/10/2006:SW:S:-:-	1.755750099	3.298512518
EOF-SPREAD073E:6/22/2006:SW:S:-:-	1.868248895	2.930634732
EOF-ZPEOF001:4/25/2006:SW:S:-:-	3.382404466	2.459325672
EOF-ZPEOF030:4/25/2006:SW:S:-:-	1.86057264	3.450591946
HFS-02:4/29/2006:SW:S:-:INITIAL	1.333681536	3.601749781
HFS-02:5/1/2006:SW:S:-:-	1.397563043	3.761655739
HFS-02:5/10/2006:SW:S:-:-	1.367029722	3.765168875
HFS-02:5/11/2006:SW:S:-:PEAK	1.395260185	3.647126593
HFS-02:5/4/2006:SW:S:-:PEAK	1.42218963	3.700975059
HFS-02:5/6/2006:SW:S:-:-	1.375194898	3.745184199
HFS-02:6/15/2005:SW:S:-:-	1.376630013	3.523662299
HFS-02:6/15/2006:SW:S:-:BF1	1.231013425	3.662862852
HFS-02:6/27/2005:SW:S:-:-	1.368542695	3.586689524
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HFS-02:8/1/2006:SW:S:-:BF2	1.283245865	3.567755044
HFS-02:8/27/2005:SW:S:-:BF2	1.305313186	3.617740521
HFS-02:9/16/2005:SW:S:-:-	1.302521819	3.552979274
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HFS-04:3/10/2006:SW:S:-:PEAK	1.704705618	6.000305109
HFS-04:4/26/2006:SW:S:-:-	1.747915245	6.009748946
HFS-04:4/30/2006:SW:S:-:-	1.576914028	4.791115055
HFS-04:4/4/2006:SW:S:-:-	1.713271495	6.161318004
HFS-04:4/8/2006:SW:S:-:-	1.623763164	5.840139729
HFS-04:5/11/2006:SW:S:-:EVENTB	1.652383118	4.246591038
HFS-04:5/25/2005:SW:S:-:1	1.579605483	4.807432971
HFS-04:5/25/2005:SW:S:-:14	1.542868796	4.60878165
HFS-04:5/25/2005:SW:S:-:7	1.596020298	4.697414241
HFS-04:5/31/2006:SW:S:-:-	1.542259821	4.310642034
HFS-04:5/31/2006:SW:S:-:PEAK	1.563170358	4.30226492

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
HFS-04:5/6/2006:SW:S:-:-	1.561197885	5.143047568
HFS-04:5/9/2006:SW:S:-:EVENTA	1.553624444	4.969052366
HFS-04:6/15/2006:SW:S:-:BF1	1.667914583	7.024958857
HFS-04:6/22/2005:SW:S:-:A	1.729921036	6.045106956
HFS-04:6/22/2005:SW:S:-:B	1.561222185	5.298717859
HFS-04:7/13/2005:SW:S:-:BF1	1.690685689	6.254657497
HFS-04:7/27/2005:SW:S:-:-	1.482483232	4.680348898
HFS-04:8/1/2006:SW:S:-:BF2	1.764814821	7.616936766
HFS-04:8/20/2005:SW:S:-:A	1.55198108	5.686418128
HFS-04:8/20/2005:SW:S:-:B	1.610616304	5.837755449
HFS-04:8/27/2005:SW:S:-:BF2	1.703425158	6.83085903
HFS-04:9/28/2005:SW:S:-:-	1.693411315	7.28907089
HFS-05:3/22/2006:SW:S:-:-	2.217729552	4.469568079
HFS-05:3/22/2006:SW:S:-:PEAK	1.432025729	4.842737059
HFS-05:4/26/2006:SW:S:-:-	1.457640549	4.182823143
HFS-05:4/26/2006:SW:S:-:PEAK	1.45051688	3.881836397
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HFS-05:6/27/2005:SW:S:-:A	1.412723305	3.827066782
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HFS-05:6/7/2005:SW:S:-:A	1.518172798	4.127311764
HFS-05:6/7/2005:SW:S:-:B	1.751627203	3.61603073
HFS-05:6/7/2006:SW:S:-:-	1.335103134	4.152896171
HFS-05:7/12/2005:SW:S:-:BF1	1.351799895	4.02855375
HFS-05:7/7/2005:SW:S:-:-	1.360772908	4.015216635
HFS-05:8/1/2006:SW:S:56:BF2	1.391179541	3.892644719
HFS-05:8/29/2005:SW:S:-:BF2	1.243692369	4.344464943
HFS-05:9/13/2005:SW:S:-:A	1.407762328	3.503022468
HFS-05:9/15/2005:SW:S:-:B	1.377649073	3.920522088
HFS-05:9/28/2005:SW:S:-:-	1.299787431	3.61187528
HFS-08:6/15/2005:SW:S:-:A	1.487958147	3.645595184
HFS-08:6/15/2005:SW:S:-:B	1.443754743	3.335611903
HFS-08:7/12/2005:SW:S:-:-	1.417010864	3.249004601
HFS-08:7/13/2005:SW:S:-:BF1	1.351541775	3.350062645
HFS-08:8/28/2005:SW:S:-:BF2	1.25745814	3.574388011
HFS-14:3/10/2006:SW:S:-:-	1.396447298	3.719905535
HFS-14:3/10/2006:SW:S:-:PEAK	1.603698281	4.013425048
HFS-14:4/25/2006:SW:S:-:-	1.484739371	3.864140691
HFS-14:4/25/2006:SW:S:-:PEAK	1.607902	3.85535217
HFS-14:4/7/2006:SW:S:-:-	1.343041963	3.728176389
HFS-14:4/7/2006:SW:S:-:PEAK	1.360140261	3.853644516
HFS-14:5/10/2006:SW:S:-:-	1.423476329	3.821208901
HFS-14:5/11/2006:SW:S:-:PEAK	1.644644767	4.157007955
HFS-14:5/31/2006:SW:S:-:-	1.840564779	4.362548532
HFS-14:6/15/2005:SW:S:-:A	1.369423956	3.420623261
HFS-14:6/15/2005:SW:S:-:B	1.302089583	3.381842365
HFS-14:6/15/2006:SW:S:-:BF1	1.181875464	3.542516316

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
HFS-14:6/5/2006:SW:S:-:-	1.385800365	3.922215217
HFS-14:6/9/2005:SW:S:-:-	1.290194111	3.425722282
HFS-14:7/12/2005:SW:S:-:BF1	1.361681564	3.273621609
HFS-14:7/23/2005:SW:S:-:-	1.231093845	3.296607894
HFS-14:8/1/2006:SW:S:-:BF2	1.257254905	3.4821004
HFS-14:8/27/2005:SW:S:-:BF2	1.228853613	3.528383924
HFS-16:3/10/2006:SW:S:-:-	1.527330932	3.644546553
HFS-16:4/25/2006:SW:S:-:-	1.493644622	3.430800325
HFS-16:5/1/2006:SW:S:-:PEAK	1.313405876	3.824956672
HFS-16:5/2/2006:SW:S:-:-	1.300807637	3.872229034
HFS-16:5/31/2006:SW:S:-:-	1.404681506	3.44873181
HFS-16:5/6/2006:SW:S:-:A	1.318156605	3.913674648
HFS-16:5/7/2006:SW:S:-:B	1.400238159	4.481312336
HFS-16:6/15/2005:SW:S:-:-	1.500737415	3.745310611
HFS-16:6/15/2006:SW:S:-:BF1	1.345576267	3.76885873
HFS-16:6/27/2005:SW:S:-:A	1.431034206	3.704986259
HFS-16:7/11/2005:SW:S:-:BF1	1.81742168	3.730909906
HFS-16:7/13/2005:SW:S:-:-	1.369101158	3.856453605
HFS-16:8/14/2005:SW:S:-:-	1.518646855	3.771122329
HFS-16:8/27/2005:SW:S:-:BF2	1.356437864	4.274976405
HFS-16:9/15/2005:SW:S:-:-	1.462266045	3.825913791
HFS-20:3/10/2006:SW:S:-:-	1.329443225	3.86627524
HFS-20:4/26/2006:SW:S:-:-	1.309085193	3.792487252
HFS-20:4/3/2006:SW:S:-:-	1.302903802	3.919811561
HFS-20:4/3/2006:SW:S:-:PEAK	1.303900601	3.893044305
HFS-20:4/30/2006:SW:S:-:-	1.310948023	4.113645417
HFS-20:4/7/2006:SW:S:-:-	1.199247215	4.113690157
HFS-20:5/10/2006:SW:S:-:EVENTB	1.611128741	3.390430243
HFS-20:5/31/2006:SW:S:-:EVENTA	1.358630104	3.813246169
HFS-20:5/31/2006:SW:S:-:EVENTB	1.368656247	3.724444352
HFS-20:5/4/2006:SW:S:-:LEADINGEDGE	1.34710859	4.09362297
HFS-20:5/6/2006:SW:S:-:PLATEAU	1.315144302	4.040752593
HFS-20:5/9/2006:SW:S:-:EVENTA	1.601458595	3.370125185
HFS-20:6/15/2005:SW:S:-:A	1.384049683	3.654477807
HFS-20:6/15/2005:SW:S:-:B	1.547538253	3.635092142
HFS-20:6/15/2006:SW:S:-:BF1	1.194189591	3.910304992
HFS-20:7/10/2005:SW:S:-:-	1.209422455	4.110013077
HFS-20:7/13/2005:SW:S:-:BF1	1.329007829	4.107193394
HFS-20:7/26/2005:SW:S:-:-	1.557847762	3.835604218
HFS-20:7/7/2005:SW:S:-:A	1.319868413	4.060928531
HFS-20:7/7/2005:SW:S:-:B	1.346799983	4.313457433
HFS-20:8/1/2006:SW:S:-:BF2	1.463593637	3.860718749
HFS-20:8/14/2005:SW:S:-:-	1.192063366	4.267794776
HFS-20:8/27/2005:SW:S:-:BF2	1.262655743	4.416714704
HFS-20:9/16/2005:SW:S:-:-	1.488155036	3.510101315
HFS-21:3/21/2006:SW:S:-:-	1.404675308	3.411219052
HFS-21:3/9/2006:SW:S:-:-	1.462303706	3.420883498
HFS-21:4/26/2006:SW:S:-:-	1.495032678	3.291512841
HFS-21:4/26/2006:SW:S:-:PEAK	1.446537929	3.130443264
HFS-21:4/29/2006:SW:S:-:PEAK	1.499520875	3.30079512
HFS-21:4/3/2006:SW:S:-:-	1.448362601	3.324760601
HFS-21:4/30/2006:SW:S:-:-	1.474210824	3.284606463
HFS-21:4/6/2006:SW:S:-:A	1.452799874	4.035489265

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
HFS-21:4/7/2006:SW:S:-:B	1.530876873	3.448752749
HFS-21:5/10/2006:SW:S:-:EVENTB	1.360358254	3.829421813
HFS-21:5/31/2006:SW:S:-:-	1.466786451	3.315372878
HFS-21:5/4/2006:SW:S:-:PEAK	1.566103229	3.694279496
HFS-21:5/5/2006:SW:S:-:-	1.525965124	3.169023194
HFS-21:5/9/2006:SW:S:-:EVENTA	1.315973836	3.894052578
HFS-21:6/15/2006:SW:S:-:BF1	1.480625804	3.54145016
HFS-21:6/7/2005:SW:S:-:-	1.517292637	3.291240117
HFS-21:7/10/2005:SW:S:-:-	1.493967099	3.561481971
HFS-21:7/13/2005:SW:S:-:BF1	1.831838742	4.143631088
HFS-21:7/7/2005:SW:S:-:-	1.500278002	3.414354791
HFS-21:8/14/2005:SW:S:-:-	1.612862944	3.847819728
HFS-21:8/20/2005:SW:S:-:-	1.364210981	3.708861515
HFS-21:9/16/2005:SW:S:-:-	1.586652453	3.940177528
HFS-21:9/28/2005:SW:S:-:-	1.571372051	3.676400499
HFS-22:3/22/2006:SW:S:-:-	1.621016822	4.83858505
HFS-22:3/22/2006:SW:S:-:PEAK	1.681311705	5.06191704
HFS-22:4/27/2006:SW:S:-:-	1.811752845	5.235951229
HFS-22:4/27/2006:SW:S:-:PEAK	1.848525461	5.435418758
HFS-22:4/30/2006:SW:S:-:-	1.584175346	3.68940338
HFS-22:4/4/2006:SW:S:-:-	1.591078756	4.819723634
HFS-22:4/4/2006:SW:S:-:PEAK	1.622633415	4.975366781
HFS-22:5/10/2006:SW:S:-:EVENTA	1.99754955	5.143617203
HFS-22:5/11/2006:SW:S:-:EVENTB	1.581430054	3.569957484
HFS-22:5/31/2006:SW:S:-:EVENTB	1.492057972	3.882184891
HFS-22:5/6/2006:SW:S:-:-	1.569438499	3.707963447
HFS-22:6/15/2005:SW:S:-:A	1.64453758	5.017073426
HFS-22:6/15/2005:SW:S:-:B	1.65599168	4.883697022
HFS-22:6/15/2006:SW:S:-:BF1	1.508948896	5.023777116
HFS-22:6/7/2005:SW:S:-:-	1.637943986	5.105203026
HFS-22:7/12/2005:SW:S:-:BF1	1.568049663	4.922583609
HFS-22:8/1/2006:SW:S:1:BF2	1.718794409	5.628433941
HFS-22:8/28/2005:SW:S:-:BF2	1.569532755	5.586118155
HFS-22:9/15/2005:SW:S:-:-	1.242417972	3.961732167
HFS-23:3/22/2006:SW:S:-:-	1.475281584	4.046465568
HFS-23:4/27/2006:SW:S:-:-	1.569580921	4.122354381
HFS-23:4/27/2006:SW:S:-:PEAK	1.565695514	3.887347262
HFS-23:4/30/2006:SW:S:-:-	1.475144008	3.893882543
HFS-23:4/4/2006:SW:S:-:-	1.461549989	4.028300881
HFS-23:4/8/2006:SW:S:-:-	1.470102578	4.147056711
HFS-23:5/10/2006:SW:S:-:PEAK	1.522146741	3.495499067
HFS-23:5/11/2006:SW:S:-:-	1.467170031	3.472770961
HFS-23:5/31/2006:SW:S:-:-	1.556331428	3.776042741
HFS-23:5/4/2006:SW:S:-:G	1.568554471	3.296627707
HFS-23:6/15/2005:SW:S:-:-	1.550043927	3.893625001
HFS-23:6/15/2006:SW:S:-:BF1	1.587533926	4.435846181
HFS-23:6/27/2005:SW:S:-:-	1.517587628	4.21412133
HFS-23:6/7/2005:SW:S:-:-	1.553241225	4.12293979
HFS-23:6/7/2006:SW:S:-:-	1.427659321	4.041717756
HFS-23:7/12/2005:SW:S:-:BF1	1.702466388	3.882598976
HFS-23:7/16/2005:SW:S:-:-	1.501193775	3.924717463
HFS-23:7/23/2005:SW:S:-:-	1.556761356	3.802305934
HFS-23:8/1/2006:SW:S:56:BF2	1.504371507	4.16974501

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
HFS-23:8/14/2005:SW:S:-:A	1.560529303	4.53826272
HFS-23:8/14/2005:SW:S:-:B	1.577330916	4.554767098
HFS-23:8/28/2005:SW:S:-:BF2	1.493218309	4.66397837
HFS-23:9/16/2005:SW:S:-:-	1.682636285	3.950475171
HFS-23:9/25/2005:SW:S:-:-	1.805147008	3.982448147
HFS-26:7/13/2005:SW:S:-:BF1	1.336368376	3.500891803
HFS-26:7/7/2005:SW:S:-:-	1.324537389	3.490798089
HFS-26:8/27/2005:SW:S:-:BF2	1.226330549	3.799763
HFS-28A:4/25/2006:SW:S:-:-	1.226127751	3.337995144
HFS-28A:4/26/2006:SW:S:-:TAIL	1.283218089	3.313678132
HFS-28A:4/29/2006:SW:S:-:RISINGLIMB	1.268814238	3.340485272
HFS-28A:4/30/2006:SW:S:-:-	1.269706683	3.395680773
HFS-28A:5/10/2006:SW:S:-:-	1.34780069	3.292534254
HFS-28A:5/4/2006:SW:S:-:LEADINGEDGE	1.295898288	3.361781651
HFS-28A:5/5/2006:SW:S:-:-	1.270249748	3.340524494
HFS-28A:6/15/2006:SW:S:-:BF1	1.198500984	3.333926762
HFS-28A:6/7/2006:SW:S:-:-	1.256405764	3.024761362
HFS-28A:8/1/2006:SW:S:-:BF2	1.248877739	3.394087845
HFS-28A:8/28/2005:SW:S:-:BF2	1.199835327	3.639529215
HFS-29:3/10/2006:SW:S:-:-	1.354472552	3.440729996
HFS-29:4/24/2006:SW:S:-:-	1.387273145	3.517380901
HFS-29:4/29/2006:SW:S:-:-	1.336399222	3.65493669
HFS-29:4/29/2006:SW:S:-:PEAK	1.426803494	3.460737672
HFS-29:4/7/2006:SW:S:-:-	1.351150316	3.526915014
HFS-29:4/7/2006:SW:S:-:PEAK	1.304768537	3.443748308
HFS-29:5/10/2006:SW:S:-:EVENTA	1.419080138	3.79910695
HFS-29:5/10/2006:SW:S:-:EVENTB	1.434881409	3.689291074
HFS-29:5/5/2006:SW:S:-:-	1.456599599	4.168030094
HFS-29:6/15/2006:SW:S:-:BF1	1.314363374	3.693220566
HFS-29:8/1/2006:SW:S:-:BF2	1.341199607	3.503019424
HFS-30:4/24/2006:SW:S:-:-	1.300041342	3.37019403
HFS-30:4/26/2006:SW:S:-:TAIL	1.276968784	3.436058034
HFS-30:4/29/2006:SW:S:-:PEAK	1.284608005	3.43048876
HFS-30:4/30/2006:SW:S:-:-	1.288950596	3.405616941
HFS-30:5/11/2006:SW:S:-:-	1.292442563	3.03754696
HFS-30:5/3/2007:SW:S:0:-	1.227336147	3.171796378
HFS-30:5/31/2006:SW:S:-:-	1.295104317	3.214015736
HFS-30:5/4/2006:SW:S:-:-	1.376967958	3.035586428
HFS-30:6/15/2006:SW:S:-:BF1	1.191923174	3.412981883
HFS-30:8/1/2006:SW:S:-:BF2	1.222053117	3.442136929
LincolnWWTP:4/2/2008:SW:S:-:-	1.434049541	3.732183707
LK-01:7/12/2005:SW:S:1:-	1.428633075	3.219390589
LK-01:7/12/2005:SW:S:14:-	1.428251015	3.443276397
LK-01:7/12/2005:SW:S:18:-	1.418152755	3.458757115
LK-01:7/12/2005:SW:S:25:-	1.457684946	3.389379398
LK-01:8/24/2005:SW:S:1:-	1.360427546	3.318308262
LK-01:8/24/2005:SW:S:14:-	1.413210239	3.449034955
LK-01:9/26/2006:SW:S:0:-	1.314818429	3.59187988
LK-01:9/26/2006:SW:S:16:-	1.354441742	3.560937145
LK-01:9/26/2006:SW:S:20:-	1.439038559	3.525683847
LK-02:7/12/2005:SW:S:1:-	1.410353199	3.275547536
LK-02:7/12/2005:SW:S:10:-	1.474240648	3.399532487
LK-02:7/12/2005:SW:S:22:-	1.583984176	3.374019464

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
LK-02:8/23/2005:SW:S:1:-	1.428555654	3.297214582
LK-02:8/23/2005:SW:S:10:-	1.431529053	3.350847148
LK-02:8/23/2005:SW:S:21:-	1.698218422	3.390134326
LK-02:9/26/2006:SW:S:0:-	1.312160237	3.637237104
LK-02:9/26/2006:SW:S:16:-	1.380480098	3.543461484
LK-02:9/26/2006:SW:S:19:-	1.729567058	3.365488963
LK-03:7/12/2005:SW:S:1:-	1.474856962	3.341223229
LK-03:7/12/2005:SW:S:3:-	1.471527953	3.304911691
LK-03:7/12/2005:SW:S:6:-	1.456329987	3.372447533
LK-03:8/23/2005:SW:S:1:-	1.39239831	3.421702658
LK-03:8/23/2005:SW:S:3:-	1.416011923	3.442894829
LK-03:8/23/2005:SW:S:4:-	1.430434914	3.419020645
LK-03:9/26/2006:SW:S:0:-	1.326222718	3.805822908
LK-04:8/23/2005:SW:S:1:-	1.4706112	3.839297436
LK-04:8/23/2005:SW:S:2:-	1.493284151	3.832152174
LK-04:8/23/2005:SW:S:3:-	1.64675074	3.763370957
LK-04:9/26/2006:SW:S:0:-	1.432230055	3.720299301
RBS-0000019:8/14/2006:SW:S:0:-	2.074817987	3.096729946
RBS-0000028:8/14/2006:SW:S:0:-	1.325139958	3.680267834
RBS-0000031:8/16/2006:SW:S:0:-	1.44707722	5.888879065
RBS-0000043:8/11/2006:SW:S:0:-	1.363134708	4.442141332
RBS-0000057:8/11/2006:SW:S:0:-	1.384417065	4.137064334
RBS-0000075:8/10/2006:SW:S:0:-	1.533456701	6.999486207
RBS-0000086:8/10/2006:SW:S:0:-	1.366441569	4.022872811
RBS-0000109:8/9/2006:SW:S:0:-	1.574855401	5.053213886
RBS-0000120:8/9/2006:SW:S:0:-	1.378097259	5.507485741
RBS-0000121:8/10/2006:SW:S:0:-	1.64148091	7.898303264
RBS-0000137:8/11/2006:SW:S:0:-	1.359230815	4.142915714
RBS-0000148:8/10/2006:SW:S:0:-	1.203956883	3.814593643
RBS-0000150:8/10/2006:SW:S:0:-	1.231897974	3.759978938
RBS-0000225:8/11/2006:SW:S:0:-	1.647520135	4.852254144
RBS-0000246:8/9/2006:SW:S:0:-	1.585066336	4.815165004
RBS-0000286:8/9/2006:SW:S:0:-	1.891390022	3.771514159
RBS-0000312:8/9/2006:SW:S:0:-	1.237484877	3.605191118
RBS-0000336:8/16/2006:SW:S:0:-	1.410167485	3.622916165
RBS-0000340:8/15/2006:SW:S:0:-	1.316039767	4.052570852
RBS-0000344:8/16/2006:SW:S:0:-	1.213557846	3.902787799
RBS-0000345:8/11/2006:SW:S:0:-	1.677782417	8.087988664
RBS-0000349:8/11/2006:SW:S:0:-	1.596612884	6.468175455
RBS-0000350:8/16/2006:SW:S:0:-	1.433952557	5.876414977
RBS-0000395:8/10/2006:SW:S:0:-	1.243195077	3.871724307
RBS-0000548:8/15/2006:SW:S:0:-	1.251340122	3.5750129
RBS-0000574:8/10/2006:SW:S:0:-	1.488228294	4.029360594
RBS-0000577:8/10/2006:SW:S:0:-	1.442429771	4.178352033
RBS-0000578:8/10/2006:SW:S:0:-	1.358118642	4.001311659
RBS-0000625:8/10/2006:SW:S:0:-	1.322937342	3.808514585
RBS-0000630:8/11/2006:SW:S:0:-	1.621516553	3.5363093
RBS-0000662:8/15/2006:SW:S:0:-	1.241242673	3.676783179
RBS-0000704:8/8/2006:SW:S:0:-	1.232718315	3.827176289
RBS-0000706:8/9/2006:SW:S:0:-	1.242865218	3.529862598
RBS-0000770:8/11/2006:SW:S:0:-	1.286635487	3.38261022
RBS-0000901:8/9/2006:SW:S:0:-	1.474231328	5.770594521
RBS-0010003:8/14/2006:SW:S:0:-	1.232709793	3.40780236

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
RBS-0010004:8/14/2006:SW:S:0:-	1.302660771	3.233192714
RBS-7198000:8/9/2006:SW:S:0:-	1.376492558	3.750083136
RogersWWTP:4/1/2008:SW:S:-:-	1.471938108	5.072511722
RS-1:6/13/2006:SW:S:0:-	1.281993938	3.57099754
RS-1:7/11/2005:SW:S:0:-	1.359272152	3.495863265
RS-1:7/12/2006:SW:S:0:-	1.223794476	3.461603128
RS-1:8/24/2005:SW:S:0:-	1.299179819	3.515748045
RS-1:8/8/2006:SW:S:0:-	1.275589372	3.535210962
RS-1:9/25/2006:SW:S:0:-	1.271671442	3.671099012
RS-10004:5/21/2007:SW:S:0:-	1.244995873	3.120231827
RS-109:5/2/2007:SW:S:0:-	1.334838716	4.147492903
RS-122:5/3/2007:SW:S:0:-	1.352914827	4.819808709
RS-133:5/21/2007:SW:S:0:-	1.354589491	3.603541283
RS-150:5/3/2007:SW:S:0:-	1.216588096	3.63255847
RS-160:5/3/2007:SW:S:0:-	1.259762422	3.608746954
RS-2:6/13/2006:SW:S:0:-	1.248018585	3.462291237
RS-2:7/11/2005:SW:S:0:-	1.373666232	3.35604759
RS-2:7/12/2006:SW:S:0:-	1.287107737	3.364380102
RS-2:8/10/2006:SW:S:0:-	1.292812322	3.413097991
RS-2:8/24/2005:SW:S:0:-	1.334390709	3.399762787
RS-2:9/25/2006:SW:S:0:-	1.322442329	3.669402375
RS-233:5/21/2007:SW:S:0:-	1.402521172	4.028533279
RS-297:5/21/2007:SW:S:0:-	1.301684433	4.689300299
RS-3:6/13/2006:SW:S:0:-	1.345626864	4.152983284
RS-3:7/11/2005:SW:S:0:-	1.425546443	3.892763635
RS-3:7/12/2006:SW:S:0:-	1.317755753	4.012685605
RS-3:8/10/2006:SW:S:0:-	1.386177443	4.280367436
RS-3:8/24/2005:SW:S:0:-	1.409310704	4.092005974
RS-3:9/25/2006:SW:S:0:-	1.575241041	3.890923314
RS-312:5/2/2007:SW:S:0:-	1.226065645	3.434449931
RS-336:5/10/2007:SW:S:0:-	1.396958637	3.774984847
RS-386:5/2/2007:SW:S:0:-	1.338007573	4.021714106
RS-399:5/2/2007:SW:S:0:-	1.498978178	3.756450669
RS-402:5/21/2007:SW:S:0:-	1.298821399	3.050047721
RS-43:5/21/2007:SW:S:0:-	1.326286986	4.104448245
RS-433A:5/2/2007:SW:S:0:-	1.27865012	3.963969476
RS-578:5/2/2007:SW:S:0:-	1.30221408	3.825084206
RS-667:5/1/2007:SW:S:0:-	1.185333304	3.515016235
RS-682:5/2/2007:SW:S:0:-	1.270410683	3.761255473
RS-696:5/21/2007:SW:S:0:-	1.276190496	3.426592902
RS-704:5/2/2007:SW:S:0:-	1.204928953	3.511927443
RS-72:5/21/2007:SW:S:0:-	1.352757618	5.001275541
RS-728:5/2/2007:SW:S:0:-	1.359772086	4.390818576
RS-75:5/8/2007:SW:S:0:-	1.37711272	5.254362355
RS-757:5/1/2007:SW:S:0:-	1.30353582	4.08260834
RS-770:5/1/2007:SW:S:0:-	1.257000059	3.30426563
RS-793:5/3/2007:SW:S:0:-	1.382424969	4.456907197
RS-795:5/1/2007:SW:S:0:-	1.33186053	3.618710073
RS-902:5/1/2007:SW:S:0:-	1.334961661	4.03317779
RS-97:5/21/2007:SW:S:0:-	1.293283111	4.207794361
RS-BALLARD:5/5/2006:SW:S:0:-	1.483008738	3.346443051
RS-FLYCREEK:5/5/2006:SW:S:0:-	1.414710248	3.494864361
RS-ILLINOISRIVER:4/30/2006:SW:S:0:-	1.684331874	3.595623736

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	**PC 1**	**PC 2**
RS-LOC:4/7/2006:SW:S:0:-	1.609970464	3.878240014
RS-OSAGE:5/5/2006:SW:S:0:-	1.355736295	4.192750955
RS-PRICECREEK:4/29/2006:SW:S:0:-	1.527208596	3.289665346
RS-TYNER:5/5/2006:SW:S:0:-	1.271316007	3.438927
SiloamWWTP:3/31/2008:SW:S:-:-	1.904874229	6.356487401
SN-SBC2:4/25/2007:SW:S:0:-	3.420633277	5.09317039
SpringdaleWWTP:3/31/2008:SW:S:-:-	1.578329521	5.946363115
SSA01:5/14/2005:SW:S:-:-	2.159217213	4.824850517
USGS-07195500:10/15/2007:SW:S:-:-	1.330287966	4.293620111
USGS-07195500:10/2/2006:SW:S:-:-	1.369389326	4.265193837
USGS-07195500:10/4/2007:SW:S:-:-	1.443270657	3.678848762
USGS-07195500:12/12/2007:SW:S:-:-	1.327751543	4.097247998
USGS-07195500:12/6/2007:SW:S:-:-	1.283260346	4.546800621
USGS-07195500:12/7/2006:SW:S:-:-	1.324230213	4.046782022
USGS-07195500:2/7/2007:SW:S:-:-	1.299676619	4.150037335
USGS-07195500:3/10/2006:SW:S:-:-	1.367232413	4.818693831
USGS-07195500:3/9/2006:SW:S:-:-	1.374079566	4.664288517
USGS-07195500:4/12/2006:SW:S:-:-	1.339278856	4.414858079
USGS-07195500:4/26/2006:SW:S:-:-	1.389761027	4.784328851
USGS-07195500:4/26/2007:SW:S:-:-	1.354551964	3.956355722
USGS-07195500:4/3/2006:SW:S:-:-	1.342626077	4.601260971
USGS-07195500:4/30/2006:SW:S:-:-	1.548001934	3.711596413
USGS-07195500:4/9/2007:SW:S:-:-	1.300150625	4.343170729
USGS-07195500:5/23/2005:SW:S:-:-	1.346316679	4.096791111
USGS-07195500:5/5/2006:SW:S:-:-	1.979235286	3.273418859
USGS-07195500:6/12/2007:SW:S:-:-	1.406440169	3.829070918
USGS-07195500:6/28/2007:SW:S:-:-	1.336508029	4.177931224
USGS-07195500:6/4/2007:SW:S:-:-	1.362442542	3.897499381
USGS-07195500:7/12/2005:SW:S:-:-	1.324193519	4.319911311
USGS-07195500:8/23/2005:SW:S:-:-	1.37159488	4.271833691
USGS-07195500:8/6/2007:SW:S:-:-	1.413641962	4.306431836
USGS-07195500:9/15/2005:SW:S:-:-	1.339718292	4.531010825
USGS-07196000:1/24/2007:SW:S:-:-	1.299623164	3.770760117
USGS-07196000:1/9/2008:SW:S:-:-	1.366101314	3.625380139
USGS-07196000:10/1/2007:SW:S:-:-	1.332333515	4.372158517
USGS-07196000:10/3/2007:SW:S:-:-	1.420772517	3.845228317
USGS-07196000:10/5/2006:SW:S:-:-	1.350928762	4.478122888
USGS-07196000:12/12/2007:SW:S:-:-	1.334839454	3.970826915
USGS-07196000:12/3/2007:SW:S:-:-	1.368150109	4.475885029
USGS-07196000:12/6/2006:SW:S:-:-	1.339107015	4.116208006
USGS-07196000:2/4/2008:SW:S:-:-	1.34973365	4.195321873
USGS-07196000:2/5/2007:SW:S:-:-	1.306484734	4.005990578
USGS-07196000:4/12/2006:SW:S:-:-	1.3285749	4.632644719
USGS-07196000:4/2/2007:SW:S:-:-	1.327888701	4.225048059
USGS-07196000:4/29/2006:SW:S:-:-	1.400249341	4.552411942
USGS-07196000:4/30/2006:SW:S:-:-	1.425264486	4.527741092
USGS-07196000:5/11/2006:SW:S:-:-	1.329491195	4.185056546
USGS-07196000:5/5/2006:SW:S:-:-	1.390327518	4.330732377
USGS-07196000:5/8/2007:SW:S:-:-	1.322446639	3.879472078
USGS-07196000:6/12/2007:SW:S:-:-	1.361741875	3.814548201
USGS-07196000:6/14/2006:SW:S:-:-	1.333510536	4.41048223
USGS-07196000:6/5/2007:SW:S:-:-	1.327239346	4.104754611
USGS-07196000:7/12/2005:SW:S:-:-	1.343696314	4.126322737

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	PC 1	PC 2
USGS-07196000:7/13/2006:SW:S:-:-	1.362976314	4.484190752
USGS-07196000:8/24/2005:SW:S:-:-	1.333204361	4.250366241
USGS-07196000:8/7/2007:SW:S:-:-	1.419999213	4.229871469
USGS-07196090:10/15/2007:SW:S:-:-	1.303077498	4.139277399
USGS-07196090:10/4/2007:SW:S:-:-	1.485877945	3.519396252
USGS-07196090:10/5/2006:SW:S:-:-	1.327201962	4.219039746
USGS-07196090:12/12/2007:SW:S:-:-	1.306472721	4.173016169
USGS-07196090:12/6/2007:SW:S:-:-	1.272483068	4.418208346
USGS-07196090:12/7/2006:SW:S:-:-	1.312509517	3.990872927
USGS-07196090:2/5/2008:SW:S:-:-	1.298079977	4.278258574
USGS-07196090:2/7/2007:SW:S:-:-	1.286683019	4.030296756
USGS-07196090:3/10/2006:SW:S:-:-	1.295708806	4.57793875
USGS-07196090:4/20/2006:SW:S:-:-	1.319101858	4.471841136
USGS-07196090:4/26/2006:SW:S:-:-	1.348031681	4.465338813
USGS-07196090:4/26/2007:SW:S:-:-	1.301739936	4.167535223
USGS-07196090:4/3/2006:SW:S:-:-	1.307895518	4.500844561
USGS-07196090:4/30/2006:SW:S:-:-	1.534968338	4.010999914
USGS-07196090:4/9/2007:SW:S:-:-	1.286199024	4.137113181
USGS-07196090:5/23/2005:SW:S:-:-	1.343440575	4.030558999
USGS-07196090:5/5/2006:SW:S:-:-	1.770443123	3.799548054
USGS-07196090:6/12/2007:SW:S:-:-	1.389198837	3.636941133
USGS-07196090:6/14/2006:SW:S:-:-	1.315113466	4.271198027
USGS-07196090:6/28/2007:SW:S:-:-	1.309001711	3.883070891
USGS-07196090:6/4/2007:SW:S:-:-	1.308355238	3.976917281
USGS-07196090:7/12/2005:SW:S:-:-	1.309952381	4.017498151
USGS-07196090:7/3/2007:SW:S:-:-	1.428517476	3.822775043
USGS-07196090:8/23/2005:SW:S:-:-	1.31890535	4.160995452
USGS-07196090:8/6/2007:SW:S:-:-	1.393734686	4.099642343
USGS-07196090:9/16/2005:SW:S:-:-	1.313756365	4.421646344
USGS-07196500:1/9/2008:SW:S:-:-	1.433296644	3.521674539
USGS-07196500:10/3/2006:SW:S:-:-	1.31050597	4.04681028
USGS-07196500:11/17/2006:SW:S:-:-	1.397552897	4.236605768
USGS-07196500:12/13/2007:SW:S:-:-	1.363049807	4.13185893
USGS-07196500:12/5/2006:SW:S:-:-	1.334461381	3.861790733
USGS-07196500:12/6/2007:SW:S:-:-	1.270514417	4.248300455
USGS-07196500:2/12/2007:SW:S:-:-	1.315452998	3.904780824
USGS-07196500:3/11/2006:SW:S:-:-	1.313365569	4.297630588
USGS-07196500:4/13/2006:SW:S:-:-	1.299360986	4.277645835
USGS-07196500:4/27/2006:SW:S:-:-	1.291713414	4.355332826
USGS-07196500:4/27/2007:SW:S:-:-	1.296870977	4.059563442
USGS-07196500:4/29/2006:SW:S:-:-	1.401841555	4.336663486
USGS-07196500:4/3/2007:SW:S:-:-	1.304782236	3.981326096
USGS-07196500:5/1/2006:SW:S:-:-	1.364360158	4.288851541
USGS-07196500:5/25/2005:SW:S:-:-	1.320285919	4.007206926
USGS-07196500:6/13/2006:SW:S:-:-	1.308832469	4.029481656
USGS-07196500:6/13/2007:SW:S:-:-	1.334541919	3.640124028
USGS-07196500:6/25/2007:SW:S:-:-	1.299885191	3.816781213
USGS-07196500:6/7/2007:SW:S:-:-	1.31751389	3.842325724
USGS-07196500:7/11/2005:SW:S:-:-	1.320449859	3.946139843
USGS-07196500:7/16/2007:SW:S:-:-	1.369819754	3.798333723
USGS-07196500:7/5/2007:SW:S:-:-	1.33729553	3.743871235
USGS-07196500:7/6/2007:SW:S:-:-	1.380228611	3.590826718
USGS-07196500:8/24/2005:SW:S:-:-	1.329355449	4.105630268

	PC Size (No Rotation) normalized to 1	
SW 3 Principal Component Scores	**PC 1**	**PC 2**
USGS-07196500:9/19/2005:SW:S:-:-	1.307730569	4.219200936
USGS-07196500:9/19/2006:SW:S:-:-	1.475199387	3.878853088
USGS-07197000:1/10/2008:SW:S:-:-	1.224374302	3.543078585
USGS-07197000:1/25/2007:SW:S:-:-	1.264321539	3.442102176
USGS-07197000:10/4/2006:SW:S:-:-	1.256190992	3.471174804
USGS-07197000:10/4/2007:SW:S:-:-	1.266476445	3.495564374
USGS-07197000:10/9/2007:SW:S:-:-	1.238107738	3.508480664
USGS-07197000:11/17/2006:SW:S:-:-	1.301978928	3.515079786
USGS-07197000:12/13/2007:SW:S:-:-	1.22425535	3.522784793
USGS-07197000:12/4/2007:SW:S:-:-	1.287798264	3.54442473
USGS-07197000:12/5/2006:SW:S:-:-	1.266573836	3.508295548
USGS-07197000:2/6/2007:SW:S:-:-	1.251428794	3.472464777
USGS-07197000:4/19/2006:SW:S:-:-	1.241119733	3.439495009
USGS-07197000:4/29/2006:SW:S:-:-	1.309152592	3.427067422
USGS-07197000:4/4/2007:SW:S:-:-	1.249073055	3.477305359
USGS-07197000:5/1/2006:SW:S:-:-	1.251296585	3.518403637
USGS-07197000:5/11/2006:SW:S:-:-	1.30963542	3.356462354
USGS-07197000:5/4/2006:SW:S:-:-	3.241936769	2.385550251
USGS-07197000:6/12/2007:SW:S:-:-	1.273254423	3.375081168
USGS-07197000:6/14/2006:SW:S:-:-	1.24760631	3.433822368
USGS-07197000:6/6/2007:SW:S:-:-	1.254054824	3.432983112
USGS-07197000:7/11/2005:SW:S:-:-	1.28360075	3.420666151
USGS-07197000:7/3/2007:SW:S:-:-	1.368064738	3.372799389
USGS-07197000:7/6/2007:SW:S:-:-	1.640925603	3.287902476
USGS-07197000:8/23/2005:SW:S:-:-	1.290121654	3.429135103
USGS-07197360:1/25/2007:SW:S:-:-	1.233561534	3.365472213
USGS-07197360:10/4/2006:SW:S:-:-	1.234856003	3.542372871
USGS-07197360:10/4/2007:SW:S:-:-	1.221065836	3.592018715
USGS-07197360:10/9/2007:SW:S:-:-	1.220228822	3.649090671
USGS-07197360:12/4/2006:SW:S:-:-	1.227824249	3.528439669
USGS-07197360:12/4/2007:SW:S:-:-	1.255062584	3.629811577
USGS-07197360:2/6/2007:SW:S:-:-	1.215838518	3.385631221
USGS-07197360:4/19/2006:SW:S:-:-	1.219826543	3.639989565
USGS-07197360:4/25/2007:SW:S:-:-	1.245010867	3.5017423
USGS-07197360:4/29/2006:SW:S:-:-	1.268432006	3.537352447
USGS-07197360:5/11/2006:SW:S:-:-	1.253656604	3.460561716
USGS-07197360:5/4/2006:SW:S:-:-	2.600770869	2.708998705
USGS-07197360:6/13/2006:SW:S:-:-	1.223892446	3.508605831
USGS-07197360:6/21/2007:SW:S:-:-	1.254897266	3.493924234
USGS-07197360:6/25/2007:SW:S:-:-	1.22845905	3.535504155
USGS-07197360:6/6/2007:SW:S:-:-	1.227597688	3.501108246
USGS-07197360:7/11/2005:SW:S:-:-	1.261585089	3.492552342
USGS-07197360:8/23/2005:SW:S:-:-	1.264322582	3.506603388