

Appendix G. Tributary Regression Statistics

Lake Whatcom Watershed Total Phosphorus and Bacteria Total Maximum Daily Loads

Volume 1. Water Quality Study Findings

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This appendix is linked to the main report on the Department of Ecology's website at www.ecy.wa.gov/biblio/0803024.html

Data for this project are available at Ecology's Environmental Information Management (EIM) website www.ecy.wa.gov/eim/index.htm. Search User Study ID, WHATCOM.

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Appendix G. Tributary Regression Statistics

Lake Whatcom Watershed Total Phosphorus and Bacteria Total Maximum Daily Loads

Volume 1. Water Quality Study Findings

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Anderson Creek

Nitrate/Nitrite

Dep Var: LNO N: 29 Multiple R: 0.873593 Squared multiple R: 0.763165

Adjusted squared multiple R: 0.698574 Standard error of estimate: 0.266319

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.375188	1.415534	0.000000	.	-0.97150	0.34186
LFL_A	-0.091010	0.777723	-0.128208	0.008968	-0.11702	0.90791
LFL_ASQ	0.042607	0.102603	0.453554	0.009024	0.41526	0.68197
SIN_YF	0.352669	0.084769	0.520224	0.688493	4.16034	0.00041
COS_YF	0.516954	0.074192	0.751310	0.925929	6.96781	0.00000
SIN2_YF	-0.092814	0.070819	-0.139657	0.948024	-1.31057	0.20352
COS2_YF	-0.012136	0.079110	-0.017715	0.807331	-0.15341	0.87947

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	5.028040	6	0.838007	11.815276	0.000006
Residual	1.560365	22	0.070926		

*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.967314

First Order Autocorrelation 0.004108

Residuals have been saved.

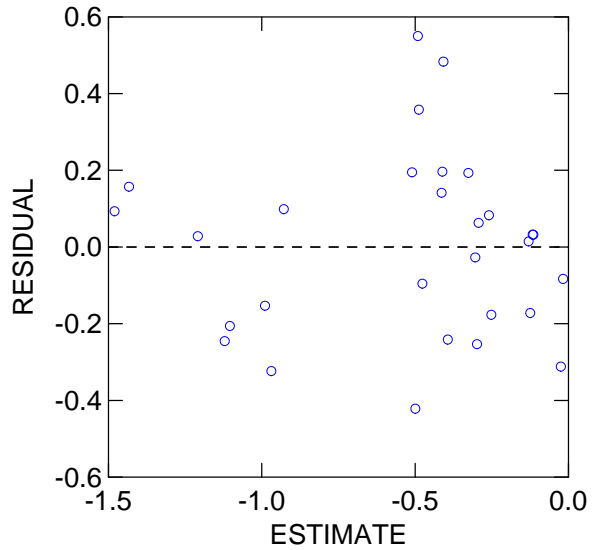
*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.967314

First Order Autocorrelation 0.004108

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_NO30203.SYD, created Mon Jul 17, 2006 at 18:24:47, contains variables:

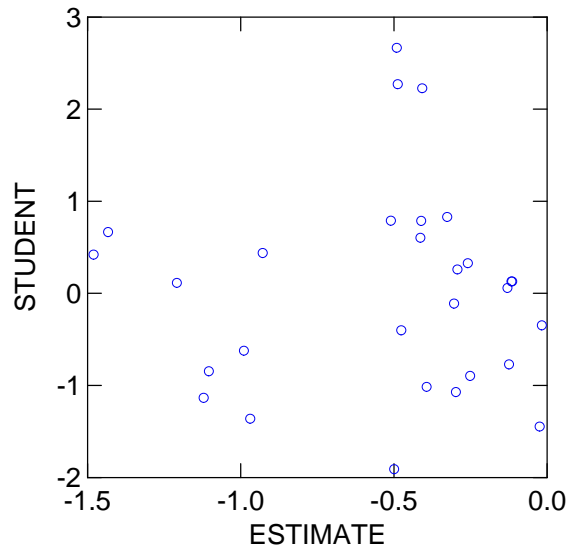
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

29 cases and 14 variables processed and saved.

RES	
N of cases	29
Minimum	0.378771
Maximum	3.545190
Mean	1.163969
Standard Dev	0.732205

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_NO30203.SYD,
created Mon Jul 17, 2006 at 18:24:47, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 29 Multiple R: 0.695540 Squared multiple R: 0.483776

Adjusted squared multiple R: 0.342988 Standard error of estimate: 0.231890

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-6.323968	1.232538	0.000000	.	-5.13085	0.00004
LFL_A	-2.329652	0.677181	-5.564609	0.008968	-3.44022	0.00234
LFL_ASQ	-0.301913	0.089339	-5.449327	0.009024	-3.37941	0.00270
SIN_YF	0.047583	0.073811	0.119012	0.688493	0.64466	0.52581
COS_YF	0.121253	0.064600	0.298796	0.925929	1.87696	0.07385
SIN2_YF	-0.036188	0.061664	-0.092326	0.948024	-0.58685	0.56328
COS2_YF	0.167042	0.068883	0.413427	0.807331	2.42503	0.02397

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.108643	6	0.184774	3.436192	0.015102
Residual	1.183003	22	0.053773		

*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.649805

First Order Autocorrelation 0.164366

Residuals have been saved.

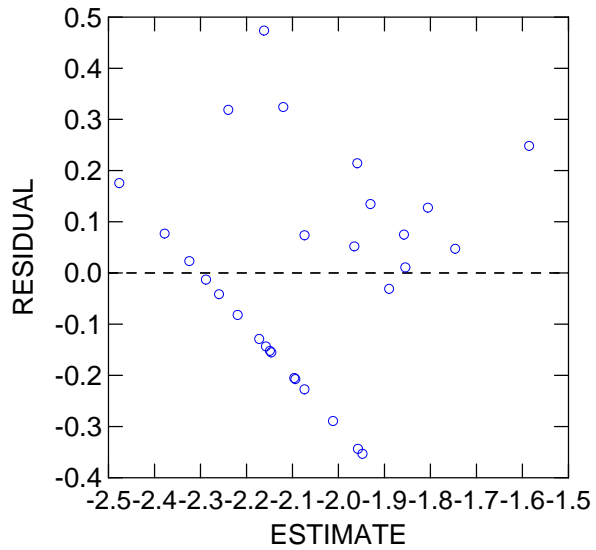
*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.649805

First Order Autocorrelation 0.164366

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_NH30203.SYD, created Mon Jul 17, 2006 at 18:24:47, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

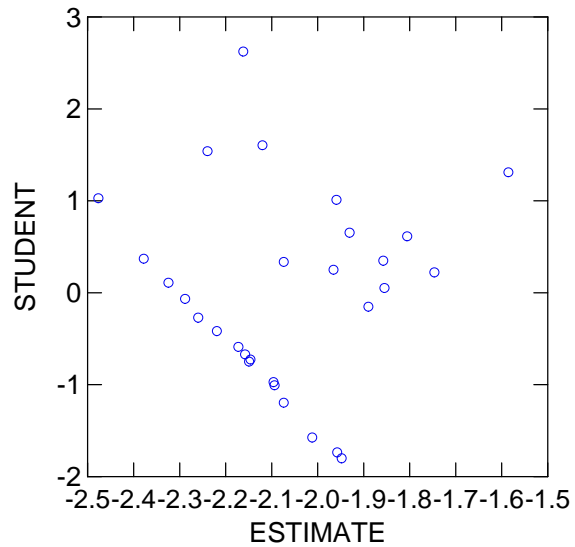
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.353341
Maximum	0.473346
Mean	0.000000
Standard Dev	0.205548

RES	
N of cases	29
Minimum	0.443260
Maximum	2.974037
Mean	1.117672
Standard Dev	0.573070

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Andersonregr_nh30203.SYD,
 created Mon Jul 17, 2006 at 18:24:47, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 29 Multiple R: 0.852670 Squared multiple R: 0.727047

Adjusted squared multiple R: 0.652605 Standard error of estimate: 0.246566

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.448100	1.310543	0.000000	.	-1.10496	0.28111
LFL_A	-0.260771	0.720038	-0.425968	0.008968	-0.36216	0.72069
LFL_ASQ	0.011614	0.094993	0.143352	0.009024	0.12226	0.90380
SIN_YF	0.290504	0.078482	0.496896	0.688493	3.70154	0.00125
COS_YF	0.439500	0.068689	0.740656	0.925929	6.39842	0.00000
SIN2_YF	-0.099722	0.065567	-0.173994	0.948024	-1.52093	0.14252
COS2	0.006868	0.073242	0.011624	0.807331	0.0931	0.9261

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	3.562553	6	0.593759	9.766638	0.000027
Residual	1.337481	22	0.060795		

*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.886389

First Order Autocorrelation 0.046391

Residuals have been saved.

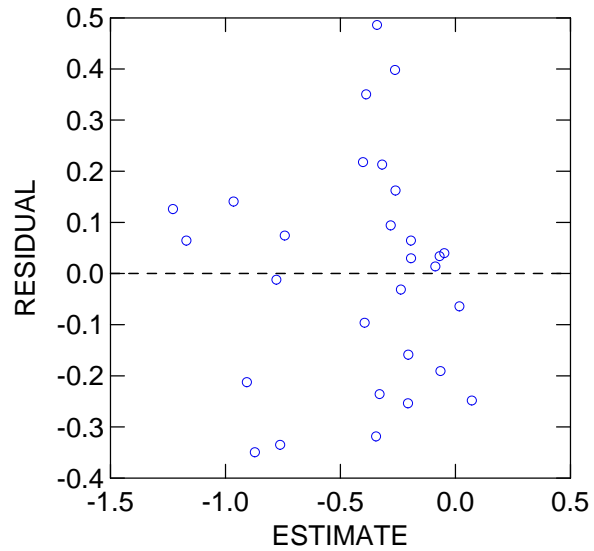
*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.886389

First Order Autocorrelation 0.046391

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_TN0203.SYD, created Mon Jul 17, 2006 at 18:24:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

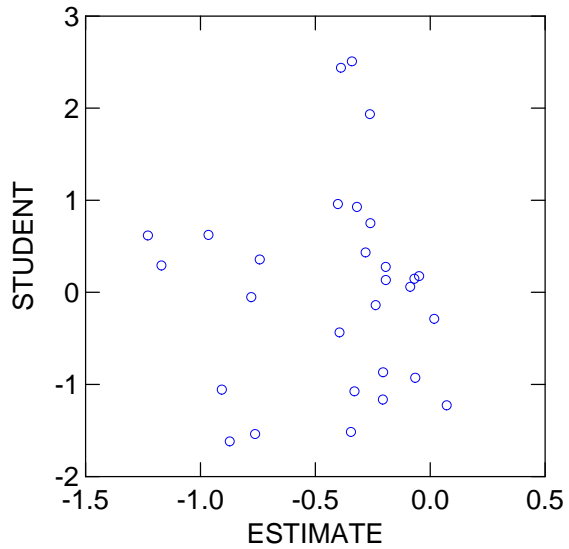
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.349691
Maximum	0.485879
Mean	0.000000
Standard Dev	0.218557

RES	
N of cases	29
Minimum	0.447002
Maximum	3.061112
Mean	1.134291
Standard Dev	0.621920

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\sysstat\Andersonregr_tn0203.SYD, created Mon Jul 17, 2006 at 18:24:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

Dep Var: LTOC N: 29 Multiple R: 0.842761 Squared multiple R: 0.710246

Adjusted squared multiple R: 0.631223 Standard error of estimate: 0.149815

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.350707	0.796296	0.000000	.	0.44042	0.66393
LFL_A	-0.084166	0.437501	-0.233132	0.008968	-0.19238	0.84921
LFL_ASQ	-0.021544	0.057719	-0.450939	0.009024	-0.37327	0.71252
SIN_YF	-0.036996	0.047686	-0.107303	0.688493	-0.77582	0.44612
COS_YF	0.245631	0.041736	0.701922	0.925929	5.88538	0.00001
SIN2_YF	-0.161118	0.039839	-0.476686	0.948024	-4.04426	0.00054
COS2_YF	-0.002960	0.044502	-0.008494	0.807331	-0.06651	0.94758

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.210359	6	0.201726	8.987763	0.000051
Residual	0.493781	22	0.022445		

*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.961246

First Order Autocorrelation 0.001721

Residuals have been saved.

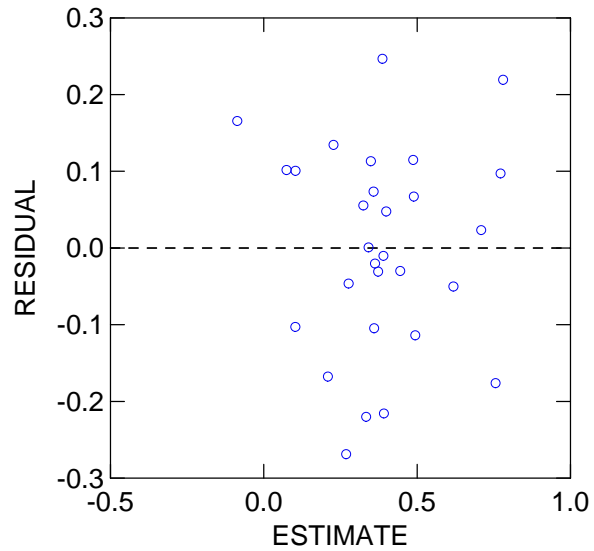
*** WARNING ***

Case 26 has large leverage (Leverage = 0.583859)

Durbin-Watson D Statistic 1.961246

First Order Autocorrelation 0.001721

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_TOC0203.SYD, created Mon Jul 17, 2006 at 18:24:49, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

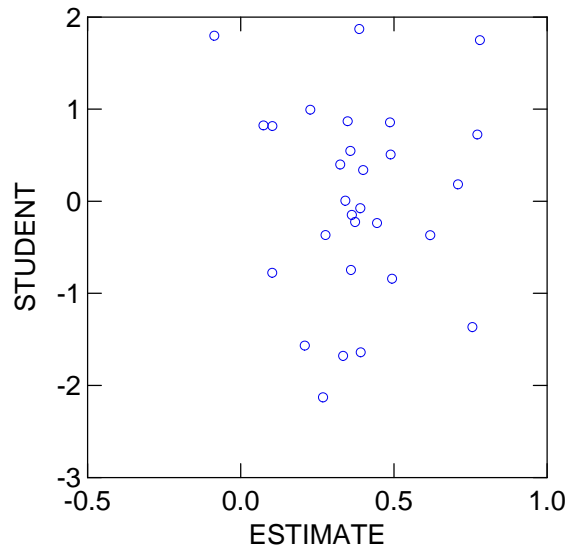
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.268934
Maximum	0.246412
Mean	0.000000
Standard Dev	0.132797

RES	
N of cases	29
Minimum	0.538351
Maximum	1.763647
Mean	1.044866
Standard Dev	0.310198

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Andersonregr_toc0203.SYD,
 created Mon Jul 17, 2006 at 18:24:49, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

6 case(s) deleted due to missing data.

Dep Var: LCOND N: 23 Multiple R: 0.841709 Squared multiple R: 0.708474

Adjusted squared multiple R: 0.599151 Standard error of estimate: 0.070011

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.155608	0.403405	0.000000	.	0.38574	0.70477
LFL_A	-0.733822	0.220160	-4.498887	0.010001	-3.33314	0.00421
LFL_ASQ	-0.080415	0.029054	-3.725438	0.010057	-2.76776	0.01372
SIN_YF	0.063694	0.030135	0.386088	0.546053	2.11361	0.05061
COS_YF	0.027069	0.025121	0.174075	0.698123	1.07751	0.29723
SIN2_YF	0.016676	0.025861	0.104321	0.696186	0.64484	0.52817
COS2_YF	0.017173	0.022442	0.114968	0.807264	0.76525	0.45526

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.190589	6	0.031765	6.480590	0.001291
Residual	0.078424	16	0.004902		

*** WARNING ***

Case 12 has large leverage (Leverage = 0.706947)
 Case 13 has large leverage (Leverage = 0.873200)
 Case 14 has large leverage (Leverage = 0.874509)
 Case 15 has large leverage (Leverage = 0.803587)
 Case 26 has large leverage (Leverage = 0.741712)
 Case 28 has large leverage (Leverage = 0.681738)

Durbin-Watson D Statistic 1.113517

First Order Autocorrelation 0.418059

Residuals have been saved.

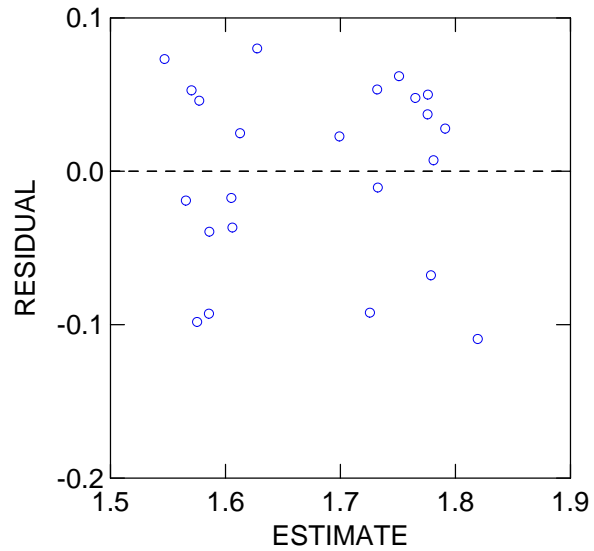
*** WARNING ***

Case 12 has large leverage (Leverage = 0.706947)
 Case 13 has large leverage (Leverage = 0.873200)
 Case 14 has large leverage (Leverage = 0.874509)
 Case 15 has large leverage (Leverage = 0.803587)
 Case 26 has large leverage (Leverage = 0.741712)
 Case 28 has large leverage (Leverage = 0.681738)

Durbin-Watson D Statistic 1.113517

First Order Autocorrelation 0.418059

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\sysstat\AndersonREGR_COND0203.SYD, created Mon Jul 17, 2006 at 18:24:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

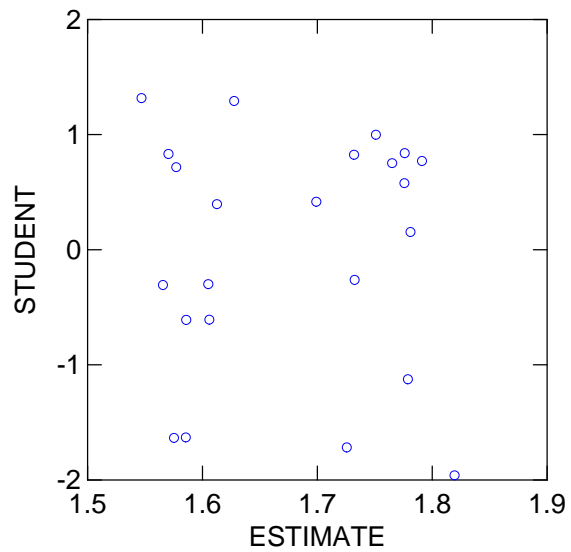
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	23
Minimum	-0.109346
Maximum	0.079939
Mean	0.000000
Standard Dev	0.059705

RES	
N of cases	23
Minimum	0.777416
Maximum	1.202094
Mean	1.008852
Standard Dev	0.133612

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Andersonregr_cond0203.SYD, created Mon Jul 17, 2006 at 18:24:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

2 case(s) deleted due to missing data.

Dep Var: LALK N: 27 Multiple R: 0.885929 Squared multiple R: 0.784870

Adjusted squared multiple R: 0.720331 Standard error of estimate: 0.051406

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.561295	0.290805	0.000000	.	1.93015	0.06789
LFL_A	-0.245170	0.158937	-1.732376	0.008528	-1.54256	0.13861
LFL_ASQ	-0.013947	0.020874	-0.750293	0.008529	-0.66812	0.51169
SIN_YF	0.073833	0.016423	0.559537	0.694379	4.49564	0.00022
COS_YF	0.055346	0.015118	0.392988	0.933466	3.66094	0.00155
SIN2_YF	-0.029614	0.014185	-0.219357	0.974275	-2.08764	0.04983
COS2_YF	0.028303	0.015433	0.208548	0.831763	1.83388	0.08160

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.192824	6	0.032137	12.161192	0.000009
Residual	0.052852	20	0.002643		

*** WARNING ***

Case 26 has large leverage (Leverage = 0.591047)

Durbin-Watson D Statistic 1.745638

First Order Autocorrelation 0.070870

Residuals have been saved.

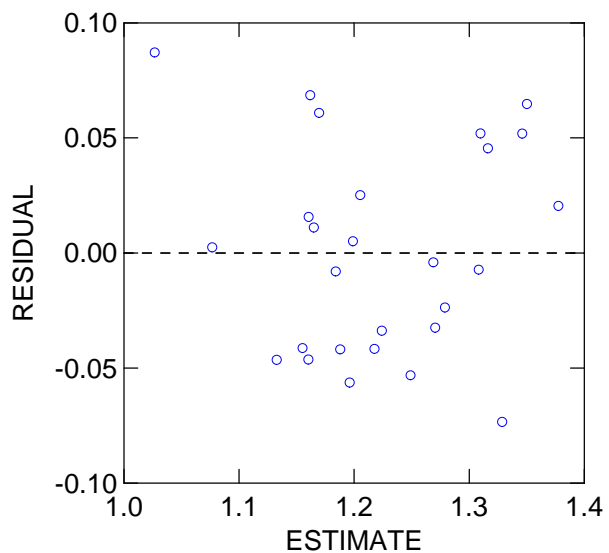
*** WARNING ***

Case 26 has large leverage (Leverage = 0.591047)

Durbin-Watson D Statistic 1.745638

First Order Autocorrelation 0.070870

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AndersonREGR_ALK0203.SYD, created Mon Jul 17, 2006 at 18:24:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

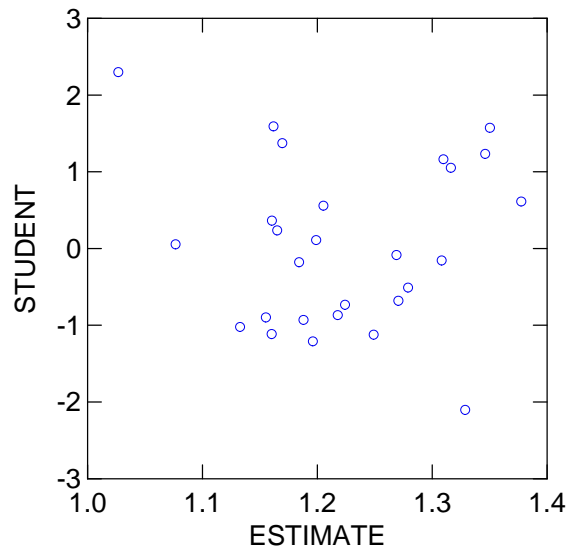
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	27
Minimum	-0.073411
Maximum	0.087082
Mean	0.000000
Standard Dev	0.045086

RES	
N of cases	27
Minimum	0.844479
Maximum	1.222031
Mean	1.005247
Standard Dev	0.105757

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Andersonregr_alk0203.SYD,
 created Mon Jul 17, 2006 at 18:24:50, contains variables:

ESTIMATE RESIDUAL LEVERAGE COOK STUDENT SEPRD
 LALK LFL_A LFL_ASQ SIN_YF COS_YF SIN2_YF
 COS2_YF



Austin Creek

Nitrate/Nitrite

3 case(s) deleted due to missing data.

Dep Var: LNO N: 29 Multiple R: 0.892762 Squared multiple R: 0.797023

Adjusted squared multiple R: 0.741666 Standard error of estimate: 0.125066

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.096344	0.860202	0.000000	.	0.11200	0.91184
LFL_A	-0.091012	0.423597	-0.294189	0.004921	-0.21485	0.83186
LFL_ASQ	-0.039737	0.051423	-1.090332	0.004634	-0.77275	0.44789
SIN_YF	-0.164397	0.064617	-0.478057	0.261308	-2.54416	0.01849
COS_YF	0.134721	0.052841	0.385979	0.402557	2.54956	0.01827
SIN2_YF	-0.031872	0.037066	-0.094541	0.763224	-0.85987	0.39913
COS2_YF	-0.041265	0.037058	-0.118742	0.811373	-1.11353	0.27750

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.351219	6	0.225203	14.397789	0.000001
Residual	0.344113	22	0.015642		

*** WARNING ***

Case 14 has large leverage (Leverage = 0.814185)

Durbin-Watson D Statistic 1.750536

First Order Autocorrelation 0.114812

Residuals have been saved.

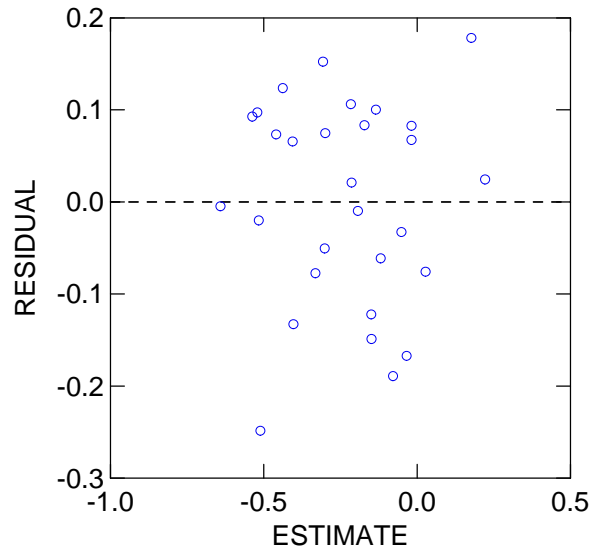
*** WARNING ***

Case 14 has large leverage (Leverage = 0.814185)

Durbin-Watson D Statistic 1.750536

First Order Autocorrelation 0.114812

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_NO30203.SYD, created Thu Jul 06, 2006 at 17:23:35, contains variables:

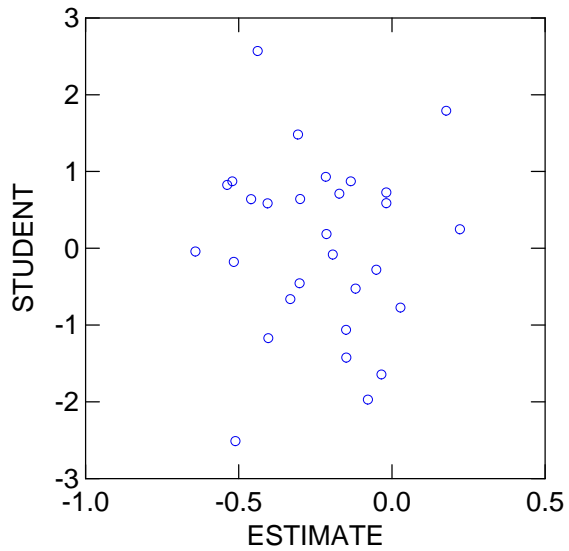
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

32 cases and 14 variables processed and saved.

RES	
N of cases	29
Minimum	0.564073
Maximum	1.506732
Mean	1.030547
Standard Dev	0.247578

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_NO30203.SYD,
 created Thu Jul 06, 2006 at 17:23:35, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

1 case(s) deleted due to missing data.

Dep Var: LNH3 N: 31 Multiple R: 0.666044 Squared multiple R: 0.443615

Adjusted squared multiple R: 0.304519 Standard error of estimate: 0.120792

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-2.614516	0.759269	0.000000	.	-3.44347	0.00212
LFL_A	-0.286195	0.379973	-1.582453	0.005252	-0.75320	0.45866
LFL_ASQ	-0.045395	0.046845	-2.116900	0.004858	-0.96905	0.34219
SIN_YF	-0.117997	0.062342	-0.587414	0.240691	-1.89274	0.07051
COS_YF	-0.156869	0.049565	-0.739753	0.424350	-3.16495	0.00418
SIN2_YF	0.073272	0.035468	0.359917	0.763784	2.06588	0.04980
COS2_YF	0.038609	0.035071	0.191669	0.764767	1.10087	0.28187

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.279204	6	0.046534	3.189268	0.019073
Residual	0.350179	24	0.014591		

*** WARNING ***

Case 10 is an outlier (Studentized Residual = 2.957746)
 Case 14 has large leverage (Leverage = 0.805005)
 Case 14 is an outlier (Studentized Residual = 3.656838)
 Case 14 has large influence (Cook distance = 5.203869)

Durbin-Watson D Statistic 1.222943
 First Order Autocorrelation 0.387121

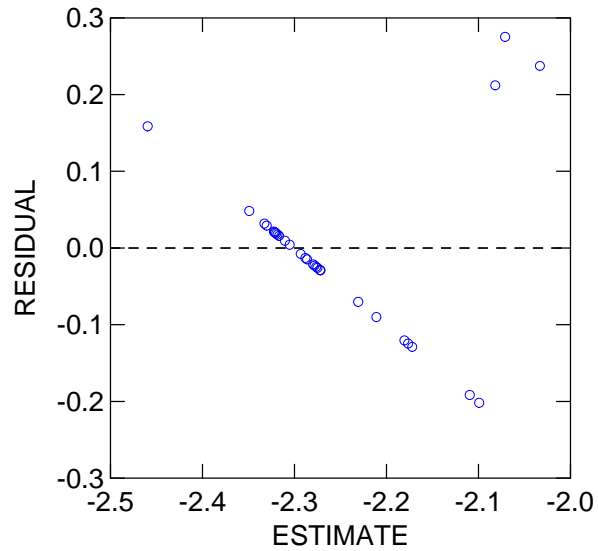
Residuals have been saved.

*** WARNING ***

Case 10 is an outlier (Studentized Residual = 2.957746)
 Case 14 has large leverage (Leverage = 0.805005)
 Case 14 is an outlier (Studentized Residual = 3.656838)
 Case 14 has large influence (Cook distance = 5.203869)

Durbin-Watson D Statistic 1.222943
 First Order Autocorrelation 0.387121

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_NH30203.SYD, created Thu Jul 06, 2006 at 17:23:36, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

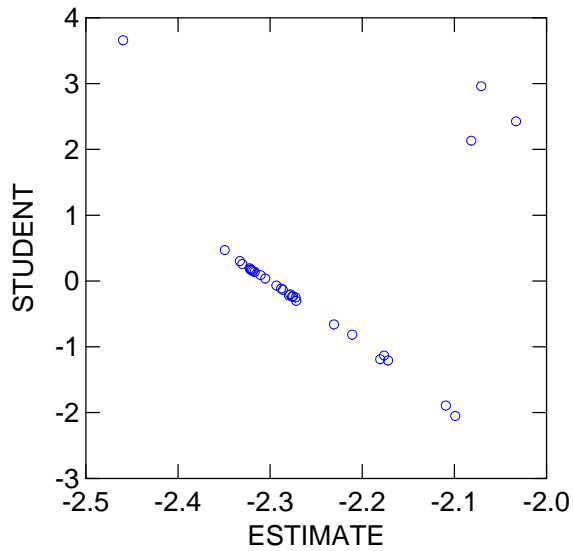
32 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	31
Minimum	-0.201977
Maximum	0.274989
Mean	0.000000
Standard Dev	0.108040

RES	
N of cases	31
Minimum	0.628092
Maximum	1.883600
Mean	1.032246
Standard Dev	0.284938

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Austinregr_nh30203.SYD,
 created Thu Jul 06, 2006 at 17:23:36, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

3 case(s) deleted due to missing data.

Dep Var: LTN N: 29 Multiple R: 0.893694 Squared multiple R: 0.798689

Adjusted squared multiple R: 0.743786 Standard error of estimate: 0.108834

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.179330	0.748560	0.000000	.	-0.23957	0.81288
LFL_A	-0.242920	0.368620	-0.898623	0.004921	-0.65900	0.51674
LFL_ASQ	-0.055735	0.044749	-1.750147	0.004634	-1.24550	0.22605
SIN_YF	-0.172485	0.056231	-0.574014	0.261308	-3.06744	0.00564
COS_YF	0.104999	0.045983	0.344269	0.402557	2.28344	0.03242
SIN2_YF	-0.045560	0.032255	-0.154662	0.763224	-1.41250	0.17179
COS2_YF	-0.043264	0.032249	-0.142472	0.811373	-1.34158	0.19342

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.033866	6	0.172311	14.547271	0.000001
Residual	0.260588	22	0.011845		

*** WARNING ***

Case 14 has large leverage (Leverage = 0.814185)

Durbin-Watson D Statistic 1.737522

First Order Autocorrelation 0.065381

Residuals have been saved.

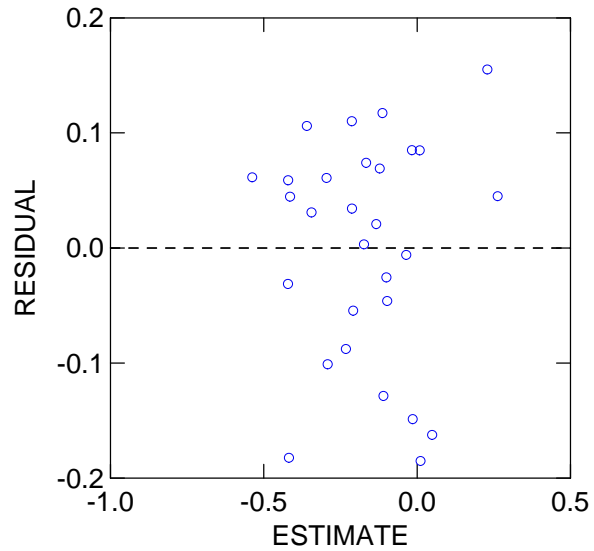
*** WARNING ***

Case 14 has large leverage (Leverage = 0.814185)

Durbin-Watson D Statistic 1.737522

First Order Autocorrelation 0.065381

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_TN0203.SYD, created Thu Jul 06, 2006 at 17:23:36, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

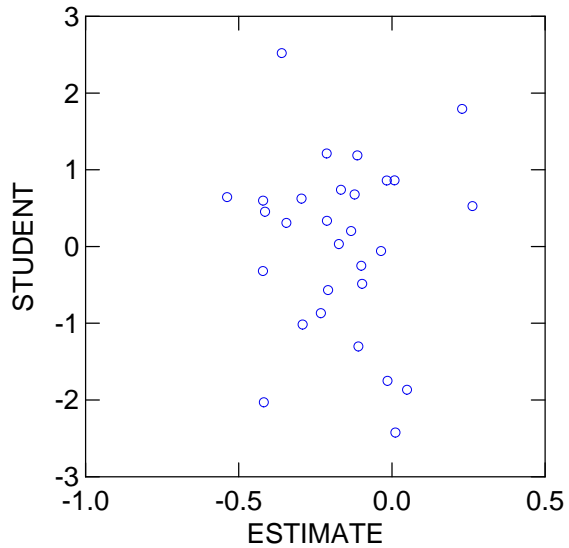
32 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.185167
Maximum	0.155087
Mean	0.000000
Standard Dev	0.096471

RES	
N of cases	29
Minimum	0.652880
Maximum	1.429181
Mean	1.023080
Standard Dev	0.213860

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Austinregr_tn0203.SYD,
 created Thu Jul 06, 2006 at 17:23:36, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

1 case(s) deleted due to missing data.

Dep Var: LTOC N: 31 Multiple R: 0.885400 Squared multiple R: 0.783932

Adjusted squared multiple R: 0.729916 Standard error of estimate: 0.121140

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.348046	0.761455	0.000000	.	1.77036	0.08937
LFL_A	0.167315	0.381067	0.574860	0.005252	0.43907	0.66454
LFL_ASQ	-0.009080	0.046980	-0.263119	0.004858	-0.19328	0.84836
SIN_YF	-0.274554	0.062521	-0.849296	0.240691	-4.39137	0.00020
COS_YF	0.048816	0.049707	0.143045	0.424350	0.98207	0.33586
SIN2_YF	-0.146808	0.035570	-0.448097	0.763784	-4.12732	0.00038
COS2_YF	-0.033194	0.035172	-0.102397	0.764767	-0.94376	0.35469

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.277840	6	0.212973	14.512731	0.000001
Residual	0.352198	24	0.014675		

*** WARNING ***

Case 14 has large leverage (Leverage = 0.805005)

Durbin-Watson D Statistic 1.900150

First Order Autocorrelation 0.000127

Residuals have been saved.

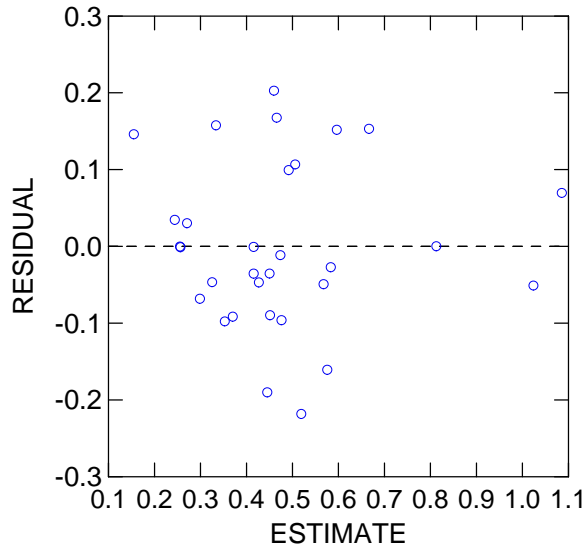
*** WARNING ***

Case 14 has large leverage (Leverage = 0.805005)

Durbin-Watson D Statistic 1.900150

First Order Autocorrelation 0.000127

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_TOC0203.SYD, created Thu Jul 06, 2006 at 17:23:38, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

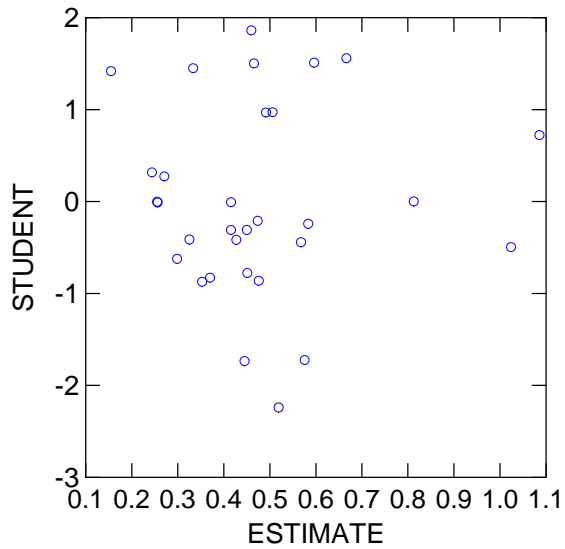
32 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	31
Minimum	-0.218261
Maximum	0.202732
Mean	0.000000
Standard Dev	0.108351

RES	
N of cases	31
Minimum	0.604977
Maximum	1.594895
Mean	1.030747
Standard Dev	0.261197

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\sysstat\Austinregr_toc0203.SYD,
 created Thu Jul 06, 2006 at 17:23:38, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

8 case(s) deleted due to missing data.

Dep Var: LCOND N: 24 Multiple R: 0.919350 Squared multiple R: 0.845205

Adjusted squared multiple R: 0.790571 Standard error of estimate: 0.076677

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.273906	0.955028	0.000000	.	1.33389	0.19983
LFL_A	-0.082941	0.500110	-0.353571	0.002003	-0.16585	0.87023
LFL_ASQ	0.014478	0.064646	0.521526	0.001679	0.22396	0.82546
SIN_YF	-0.036915	0.075857	-0.151444	0.094022	-0.48664	0.63272
COS_YF	0.043062	0.050405	0.183457	0.197463	0.85432	0.40480
SIN2_YF	-0.040931	0.034500	-0.174608	0.420385	-1.18641	0.25178
COS2_YF	0.002614	0.025272	0.011300	0.762980	0.10344	0.91883

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.545741	6	0.090957	15.470426	0.000005
Residual	0.099950	17	0.005879		

*** WARNING ***

Case 6 has large leverage (Leverage = 0.877009)
 Case 14 has large leverage (Leverage = 5.152632)
 Case 16 has large leverage (Leverage = 1.674360)
 Case 17 has large leverage (Leverage = 1.198417)
 Case 31 has large leverage (Leverage = 1.054144)

Durbin-Watson D Statistic 1.175459
 First Order Autocorrelation 0.366685

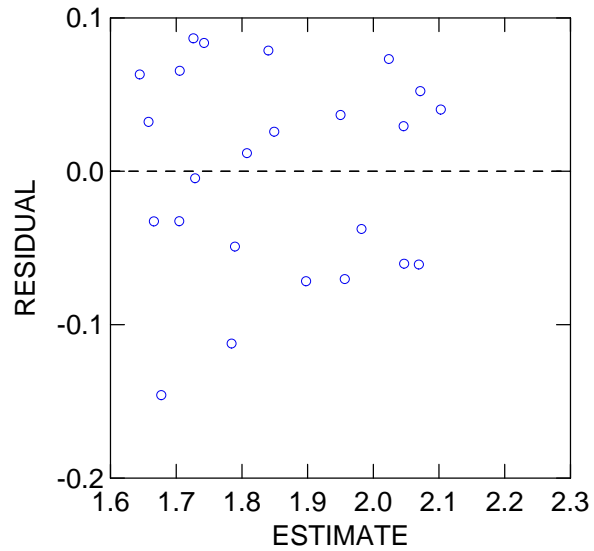
Residuals have been saved.

*** WARNING ***

Case 6 has large leverage (Leverage = 0.877009)
 Case 14 has large leverage (Leverage = 5.152632)
 Case 16 has large leverage (Leverage = 1.674360)
 Case 17 has large leverage (Leverage = 1.198417)
 Case 31 has large leverage (Leverage = 1.054144)

Durbin-Watson D Statistic 1.175459
 First Order Autocorrelation 0.366685

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_COND0203.SYD, created Thu Jul 06, 2006 at 17:23:38, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

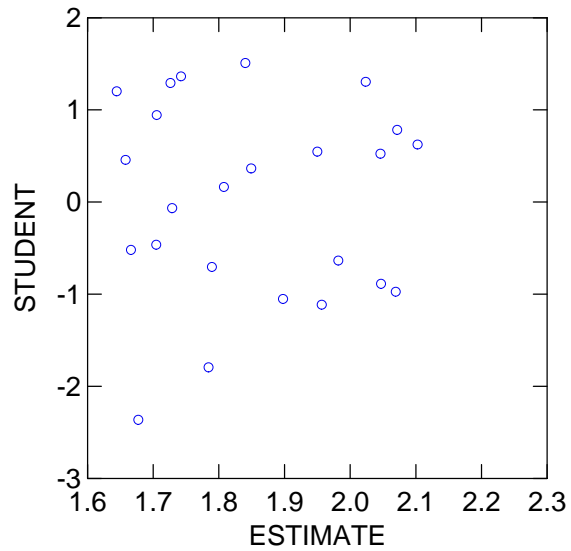
32 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.145929
Maximum	0.086589
Mean	0.000000
Standard Dev	0.065921

RES	
N of cases	24
Minimum	0.714613
Maximum	1.220644
Mean	1.010833
Standard Dev	0.148192

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Austinregr_cond0203.SYD, created Thu Jul 06, 2006 at 17:23:38, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

4 case(s) deleted due to missing data.

Dep Var: LALK N: 28 Multiple R: 0.948118 Squared multiple R: 0.898928

Adjusted squared multiple R: 0.870050 Standard error of estimate: 0.070469

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.532995	0.572183	0.000000	.	-0.93151	0.36218
LFL_A	-0.663368	0.277358	-2.626373	0.003991	-2.39174	0.02621
LFL ASQ	-0.050578	0.033073	-1.719442	0.003807	-1.52928	0.14112
SIN_YF	-0.001237	0.036433	-0.004596	0.262772	-0.03396	0.97323
COS_YF	-0.011117	0.029821	-0.039670	0.425076	-0.37281	0.71303
SIN2_YF	-0.000797	0.020935	-0.002957	0.797110	-0.03805	0.97001
COS2_YF	0.005069	0.022006	0.018448	0.750369	0.23035	0.82005

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.927482	6	0.154580	31.128618	0.000000
Residual	0.104283	21	0.004966		

*** WARNING ***

Case 14 has large leverage (Leverage = 0.831569)
 Case 17 is an outlier (Studentized Residual = -4.102686)
 Case 31 has large leverage (Leverage = 0.661685)

Durbin-Watson D Statistic 2.096214
 First Order Autocorrelation -0.103714

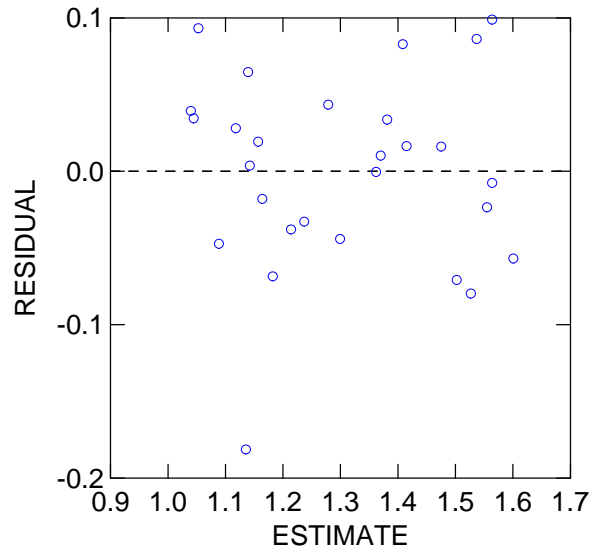
Residuals have been saved.

*** WARNING ***

Case 14 has large leverage (Leverage = 0.831569)
 Case 17 is an outlier (Studentized Residual = -4.102686)
 Case 31 has large leverage (Leverage = 0.661685)

Durbin-Watson D Statistic 2.096214
 First Order Autocorrelation -0.103714

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\AustinREGR_ALK0203.SYD, created Thu Jul 06, 2006 at 17:23:39, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

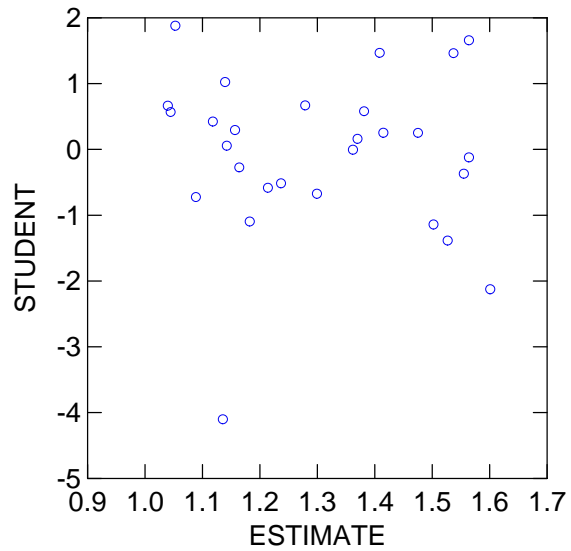
32 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	28
Minimum	-0.181360
Maximum	0.098783
Mean	0.000000
Standard Dev	0.062148

RES	
N of cases	28
Minimum	0.658628
Maximum	1.255401
Mean	1.009632
Standard Dev	0.139036

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Austinregr_alk0203.SYD,
 created Thu Jul 06, 2006 at 17:23:39, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Brannian Creek

Nitrate/Nitrite

Dep Var: LNO N: 25 Multiple R: 0.804411 Squared multiple R: 0.647077

Adjusted squared multiple R: 0.529436 Standard error of estimate: 0.224167

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.286171	1.651871	0.000000	.	0.17324	0.86440
LFL_A	0.154305	0.860880	0.334998	0.005613	0.17924	0.85975
LFL_ASQ	0.002633	0.110990	0.045618	0.005301	0.02372	0.98134
SIN_YF	0.240918	0.125912	0.490955	0.297803	1.91338	0.07174
COS_YF	0.087774	0.101689	0.196695	0.377583	0.86317	0.39940
SIN2_YF	0.047269	0.074044	0.105776	0.714183	0.63839	0.53126
COS2_YF	0.147809	0.068099	0.321697	0.892550	2.17050	0.04359

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.658406	6	0.276401	5.500436	0.002180
Residual	0.904514	18	0.050251		

*** WARNING ***

Case 13 is an outlier (Studentized Residual = -4.026963)
 Case 14 is an outlier (Studentized Residual = 5.331959)

Durbin-Watson D Statistic 2.037680
 First Order Autocorrelation -0.066398

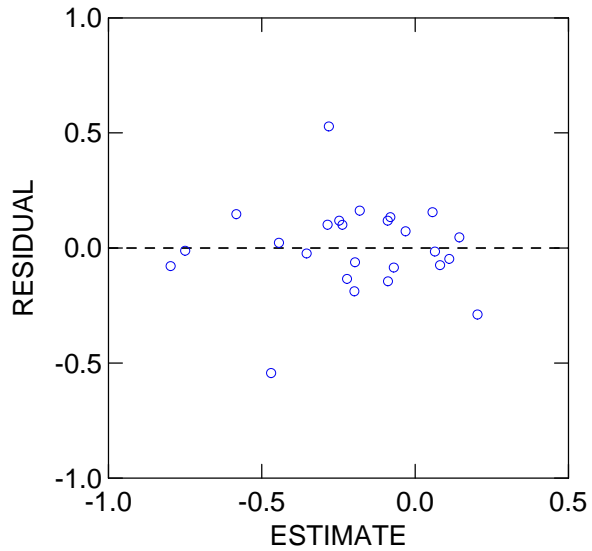
Residuals have been saved.

*** WARNING ***

Case 13 is an outlier (Studentized Residual = -4.026963)
 Case 14 is an outlier (Studentized Residual = 5.331959)

Durbin-Watson D Statistic 2.037680
 First Order Autocorrelation -0.066398

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_NO30203.SYD, created Fri Jul 07, 2006 at 11:11:24, contains variables:

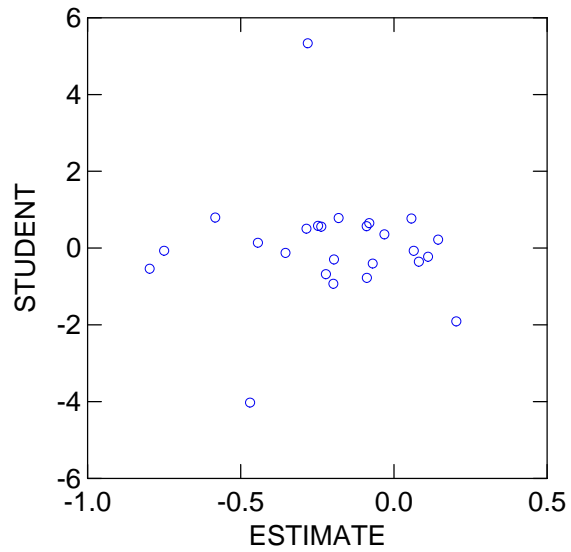
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

25 cases and 14 variables processed and saved.

RES	
N of cases	25
Minimum	0.285841
Maximum	3.370115
Mean	1.101726
Standard Dev	0.561153

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_NO30203.SYD,
created Fri Jul 07, 2006 at 11:11:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 25 Multiple R: 0.578152 Squared multiple R: 0.334260

Adjusted squared multiple R: 0.112347 Standard error of estimate: 0.172568

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-4.719257	1.271646	0.000000	.	-3.71114	0.00160
LFL_A	-1.353056	0.662724	-5.240840	0.005613	-2.04166	0.05612
LFL_ASQ	-0.176178	0.085443	-5.446631	0.005301	-2.06195	0.05395
SIN_YF	-0.031270	0.096930	-0.113690	0.297803	-0.32260	0.75071
COS_YF	-0.055346	0.078282	-0.221275	0.377583	-0.70701	0.48862
SIN2_YF	0.133144	0.057001	0.531559	0.714183	2.33582	0.03127
COS2_YF	0.029830	0.052424	0.115830	0.892550	0.56901	0.57638

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.269138	6	0.044856	1.506265	0.232127
Residual	0.536037	18	0.029780		

*** WARNING ***

Case 3 is an outlier (Studentized Residual = 3.040963)

Durbin-Watson D Statistic 1.420819

First Order Autocorrelation 0.267649

Residuals have been saved.

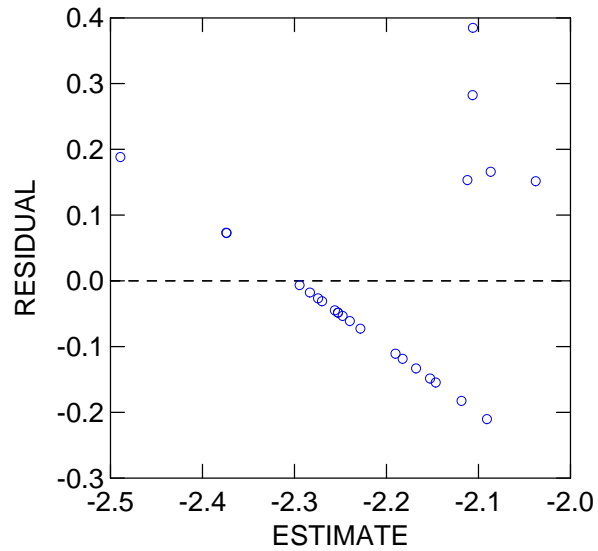
*** WARNING ***

Case 3 is an outlier (Studentized Residual = 3.040963)

Durbin-Watson D Statistic 1.420819

First Order Autocorrelation 0.267649

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_NH30203.SYD, created Fri Jul 07, 2006 at 11:11:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

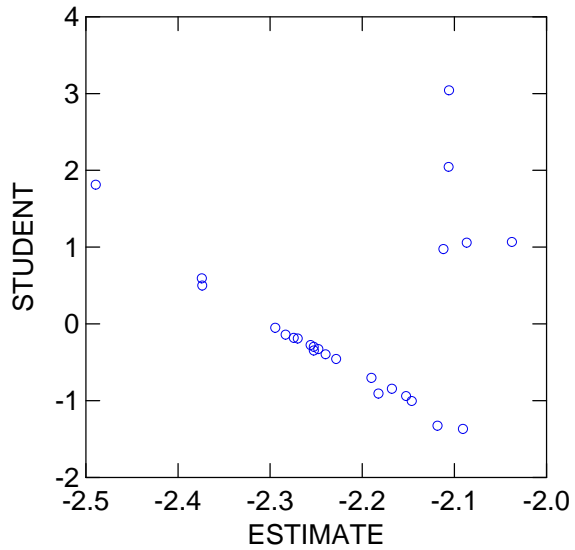
25 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	25
Minimum	-0.210360
Maximum	0.384571
Mean	0.000000
Standard Dev	0.149449

RES	
N of cases	25
Minimum	0.616084
Maximum	2.424212
Mean	1.064444
Standard Dev	0.428499

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Brannianregr_nh30203.SYD, created Fri Jul 07, 2006 at 11:11:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 25 Multiple R: 0.839590 Squared multiple R: 0.704912

Adjusted squared multiple R: 0.606549 Standard error of estimate: 0.158003

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.053874	1.164312	0.000000	.	-0.04627	0.96360
LFL_A	-0.083696	0.606786	-0.235728	0.005613	-0.13793	0.89182
LFL_ASQ	-0.028143	0.078231	-0.632653	0.005301	-0.35974	0.72323
SIN_YF	0.138161	0.088748	0.365258	0.297803	1.55677	0.13693
COS_YF	0.102321	0.071675	0.297461	0.377583	1.42757	0.17054
SIN2_YF	0.008052	0.052190	0.023375	0.714183	0.15428	0.87910
COS2_YF	0.108086	0.047999	0.305181	0.892550	2.25182	0.03706

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.073456	6	0.178909	7.166455	0.000504
Residual	0.449367	18	0.024965		

*** WARNING ***

Case 13 is an outlier (Studentized Residual = -3.072019)
 Case 14 is an outlier (Studentized Residual = 5.520899)

Durbin-Watson D Statistic 1.939094
 First Order Autocorrelation -0.029046

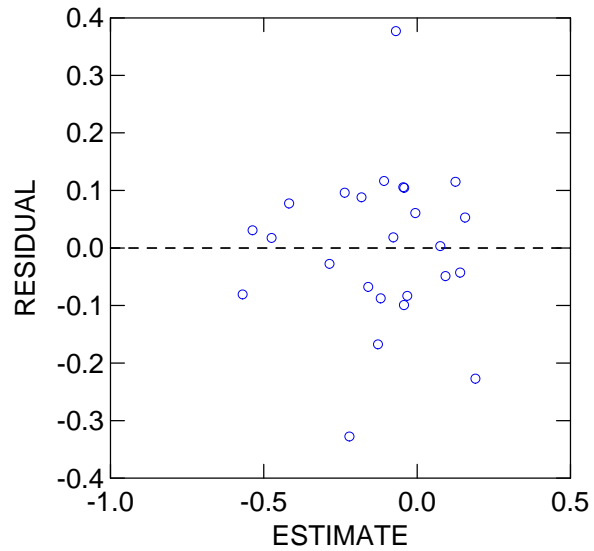
Residuals have been saved.

*** WARNING ***

Case 13 is an outlier (Studentized Residual = -3.072019)
 Case 14 is an outlier (Studentized Residual = 5.520899)

Durbin-Watson D Statistic 1.939094
 First Order Autocorrelation -0.029046

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_TN0203.SYD, created Fri Jul 07, 2006 at 11:11:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

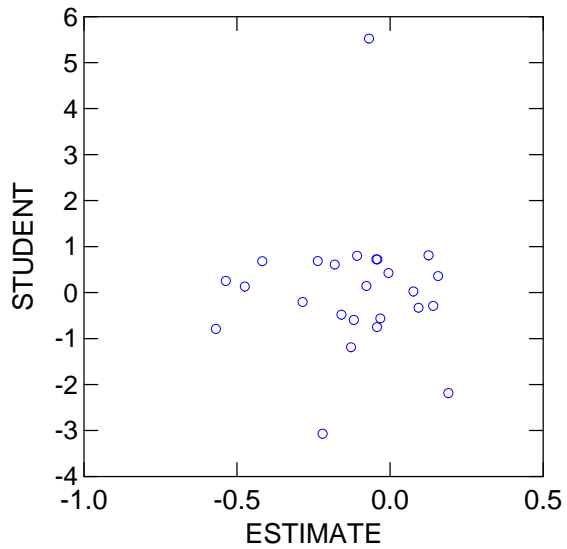
25 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	25
Minimum	-0.327798
Maximum	0.376679
Mean	0.000000
Standard Dev	0.136834

RES	
N of cases	25
Minimum	0.470112
Maximum	2.380558
Mean	1.049967
Standard Dev	0.359689

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Brannianregr_tn0203.SYD,
 created Fri Jul 07, 2006 at 11:11:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

Dep Var: LTOC N: 25 Multiple R: 0.939403 Squared multiple R: 0.882477

Adjusted squared multiple R: 0.843303 Standard error of estimate: 0.092719

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.086696	0.683239	0.000000	.	1.59051	0.12913
LFL_A	0.038607	0.356073	0.116938	0.005613	0.10842	0.91486
LFL_ASQ	-0.026280	0.045907	-0.635334	0.005301	-0.57246	0.57409
SIN_YF	-0.352107	0.052079	-1.001084	0.297803	-6.76100	0.00000
COS_YF	0.061369	0.042060	0.191865	0.377583	1.45908	0.16177
SIN2_YF	-0.121591	0.030626	-0.379608	0.714183	-3.97023	0.00090
COS2_YF	-0.020326	0.028167	-0.061720	0.892550	-0.72163	0.47979

Analysis of Variance

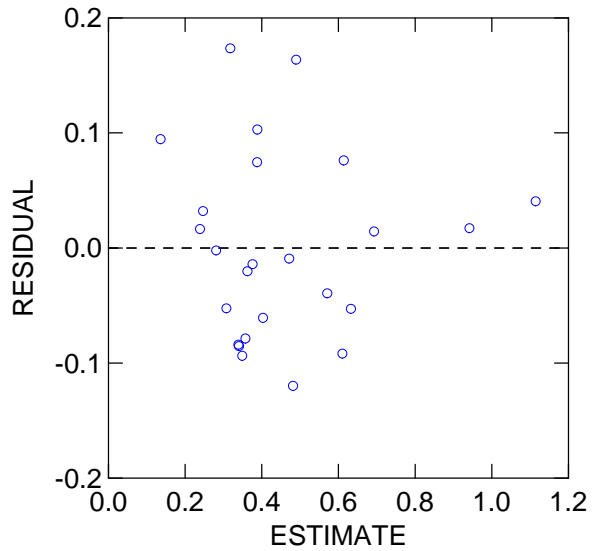
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.161955	6	0.193659	22.527002	0.000000
Residual	0.154742	18	0.008597		

Durbin-Watson D Statistic 1.993250
 First Order Autocorrelation -0.048079

Residuals have been saved.

Durbin-Watson D Statistic 1.993250
 First Order Autocorrelation -0.048079

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_TOC0203.SYD, created Fri Jul 07, 2006 at 11:11:25, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

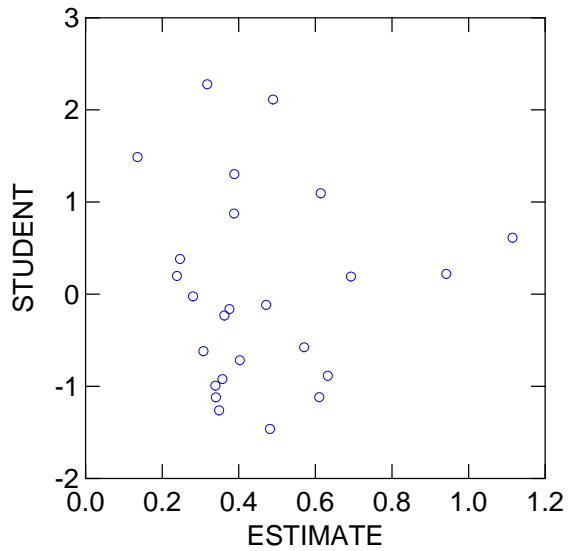
25 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	25
Minimum	-0.119864
Maximum	0.173421
Mean	0.000000
Standard Dev	0.080297

RES	
N of cases	25
Minimum	0.758815
Maximum	1.490806
Mean	1.017086
Standard Dev	0.198031

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Brannianregr_toc0203.SYD,
 created Fri Jul 07, 2006 at 11:11:25, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

3 case(s) deleted due to missing data.

Dep Var: LCOND N: 22 Multiple R: 0.561738 Squared multiple R: 0.315549

Adjusted squared multiple R: 0.041769 Standard error of estimate: 0.090222

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.398709	1.002736	0.000000	.	1.39489	0.18336
LFL_A	-0.091345	0.499940	-0.630891	0.003827	-0.18271	0.85747
LFL_ASQ	-0.007774	0.062510	-0.431725	0.003787	-0.12437	0.90267
SIN_YF	-0.062571	0.064600	-0.423253	0.238967	-0.96860	0.34811
COS_YF	0.024170	0.048924	0.193132	0.298567	0.49403	0.62844
SIN2_YF	-0.019886	0.034972	-0.155301	0.611705	-0.56862	0.57803
COS2_YF	-0.004107	0.031105	-0.032310	0.761944	-0.13203	0.89671

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.056291	6	0.009382	1.152563	0.380781
Residual	0.122101	15	0.008140		

*** WARNING ***

Case 12 has large leverage (Leverage = 1.470529)
 Case 14 has large leverage (Leverage = 1.491371)
 Case 24 has large leverage (Leverage = 0.713240)
 Case 25 has large leverage (Leverage = 1.328155)

Durbin-Watson D Statistic 0.957617

First Order Autocorrelation 0.471201

Residuals have been saved.

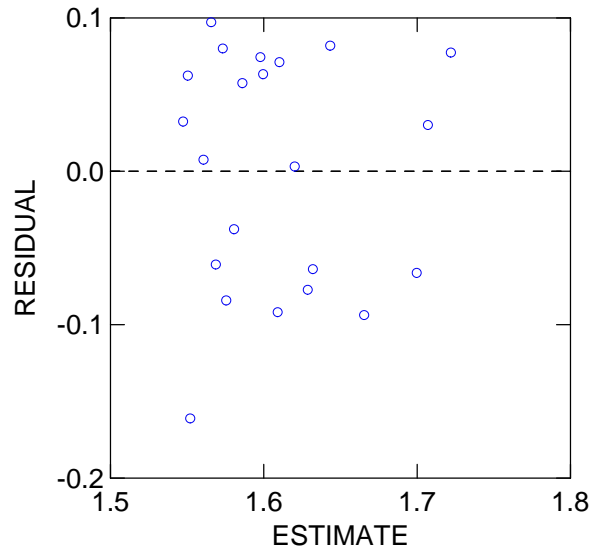
*** WARNING ***

Case 12 has large leverage (Leverage = 1.470529)
 Case 14 has large leverage (Leverage = 1.491371)
 Case 24 has large leverage (Leverage = 0.713240)
 Case 25 has large leverage (Leverage = 1.328155)

Durbin-Watson D Statistic 0.957617

First Order Autocorrelation 0.471201

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_COND0203.SYD, created Fri Jul 07, 2006 at 11:11:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

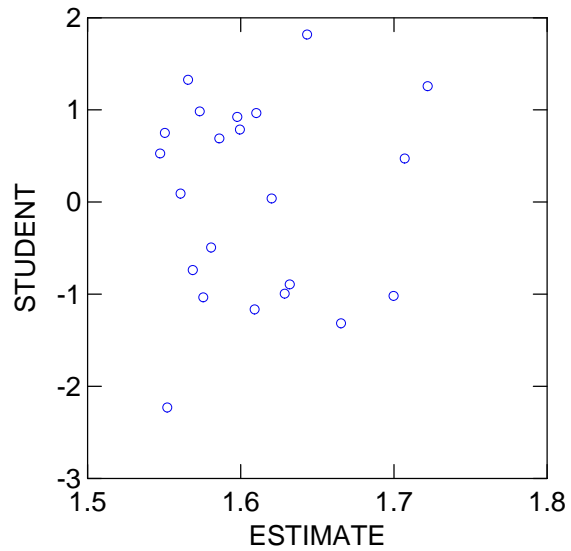
25 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	22
Minimum	-0.161129
Maximum	0.097085
Mean	0.000000
Standard Dev	0.076252

RES	
N of cases	22
Minimum	0.690035
Maximum	1.250503
Mean	1.014433
Standard Dev	0.171354

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Brannianregr_cond0203.SYD, created Fri Jul 07, 2006 at 11:11:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 24 Multiple R: 0.963116 Squared multiple R: 0.927593

Adjusted squared multiple R: 0.902038 Standard error of estimate: 0.052507

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.154410	0.484007	0.000000	.	0.31902	0.75359
LFL_A	-0.351825	0.245614	-1.433044	0.004256	-1.43243	0.17015
LFL_ASQ	-0.027139	0.030763	-0.895825	0.004130	-0.88218	0.38998
SIN_YF	-0.132179	0.029527	-0.534629	0.298623	-4.47660	0.00033
COS_YF	0.012271	0.023855	0.053058	0.400369	0.51442	0.61358
SIN2_YF	-0.038973	0.017348	-0.168744	0.754870	-2.24647	0.03825
COS2_YF	-0.032153	0.016907	-0.137567	0.814019	-1.90180	0.07428

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.600429	6	0.100071	36.297402	0.000000
Residual	0.046869	17	0.002757		

*** WARNING ***

Case 25 has large leverage (Leverage = 0.913365)

Durbin-Watson D Statistic 1.379460

First Order Autocorrelation 0.231653

Residuals have been saved.

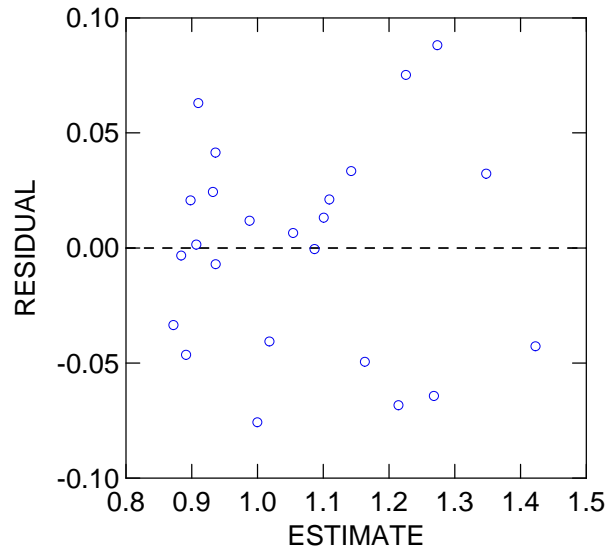
*** WARNING ***

Case 25 has large leverage (Leverage = 0.913365)

Durbin-Watson D Statistic 1.379460

First Order Autocorrelation 0.231653

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\BrannianREGR_ALK0203.SYD, created Fri Jul 07, 2006 at 11:11:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

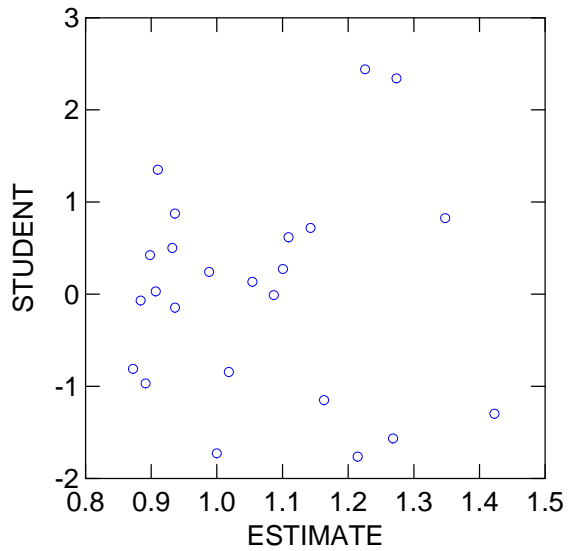
25 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.075729
Maximum	0.088051
Mean	0.000000
Standard Dev	0.045142

RES	
N of cases	24
Minimum	0.839985
Maximum	1.224760
Mean	1.005196
Standard Dev	0.104800

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Brannianregr_alk0203.SYD,
 created Fri Jul 07, 2006 at 11:11:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Carpenter Creek

Nitrate/Nitrite

Dep Var: LNO N: 20 Multiple R: 0.901490 Squared multiple R: 0.812684

Adjusted squared multiple R: 0.726231 Standard error of estimate: 0.117270

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.364581	1.205194	0.000000	.	0.30251	0.76705
LFL_A	0.051866	0.589902	0.158270	0.004447	0.08792	0.93128
LFL_ASQ	-0.025227	0.069980	-0.649237	0.004442	-0.36049	0.72427
SIN_YF	0.015231	0.107012	0.028230	0.366253	0.14233	0.88900
COS_YF	-0.167370	0.076961	-0.550046	0.225240	-2.17473	0.04870
SIN2_YF	0.239882	0.069576	0.745241	0.308402	3.44778	0.00433
COS2_YF	0.022824	0.049491	0.076620	0.521996	0.46117	0.65230

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.775652	6	0.129275	9.400249	0.000418
Residual	0.178780	13	0.013752		

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)
 Case 10 is an outlier (Studentized Residual = -5.126251)
 Case 10 has large influence (Cook distance = 9.490870)
 Case 11 is an outlier (Studentized Residual = 3.638831)

Durbin-Watson D Statistic 2.335690
 First Order Autocorrelation -0.169828

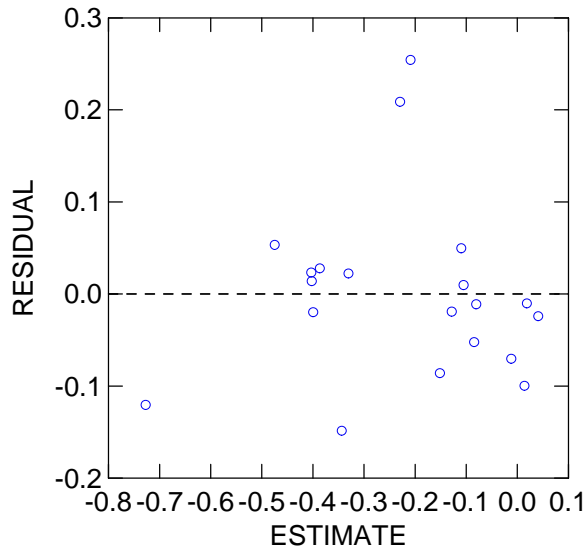
Residuals have been saved.

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)
 Case 10 is an outlier (Studentized Residual = -5.126251)
 Case 10 has large influence (Cook distance = 9.490870)
 Case 11 is an outlier (Studentized Residual = 3.638831)

Durbin-Watson D Statistic 2.335690
 First Order Autocorrelation -0.169828

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_NO30203.SYD, created Fri Jul 07, 2006 at 14:36:54, contains variables:

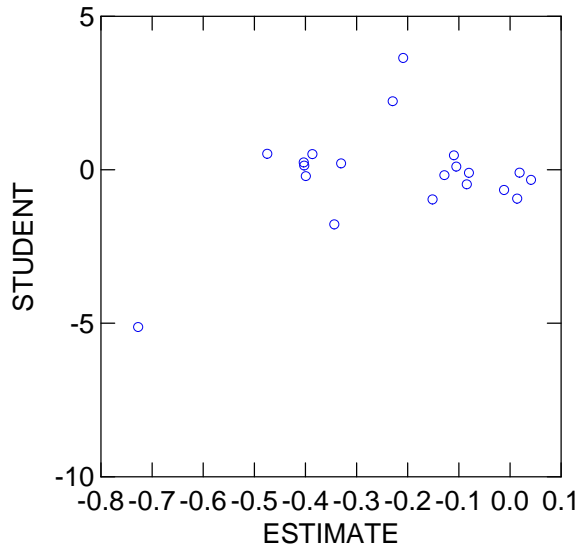
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

20 cases and 14 variables processed and saved.

RES	
N of cases	20
Minimum	0.710113
Maximum	1.795284
Mean	1.026040
Standard Dev	0.261898

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_NO30203.SYD, created Fri Jul 07, 2006 at 14:36:54, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 20 Multiple R: 0.813079 Squared multiple R: 0.661097

Adjusted squared multiple R: 0.504680 Standard error of estimate: 0.145845

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.018365	1.498861	0.000000	.	-0.01225	0.99041
LFL_A	1.019402	0.733643	3.364371	0.004447	1.38951	0.18802
LFL_ASQ	0.114377	0.087032	3.183648	0.004442	1.31420	0.21150
SIN_YF	0.135272	0.133088	0.271172	0.366253	1.01641	0.32798
COS_YF	-0.268601	0.095714	-0.954720	0.225240	-2.80629	0.01485
SIN2_YF	-0.008352	0.086529	-0.028063	0.308402	-0.09652	0.92458
COS2_YF	0.118096	0.061550	0.428783	0.521996	1.91869	0.07725

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.539409	6	0.089902	4.226513	0.014069
Residual	0.276521	13	0.021271		

*** WARNING ***

Case 1 is an outlier (Studentized Residual = 2.674308)
 Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)

Durbin-Watson D Statistic 1.434658
 First Order Autocorrelation 0.124421

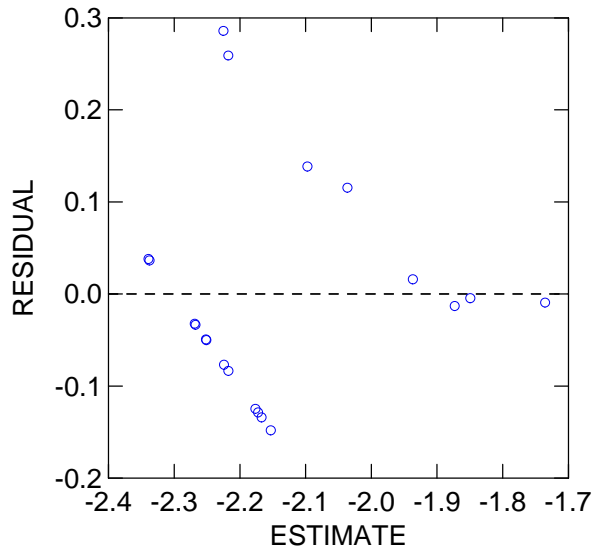
Residuals have been saved.

*** WARNING ***

Case 1 is an outlier (Studentized Residual = 2.674308)
 Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)

Durbin-Watson D Statistic 1.434658
 First Order Autocorrelation 0.124421

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_NH30203.SYD, created Fri Jul 07, 2006 at 14:36:54, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

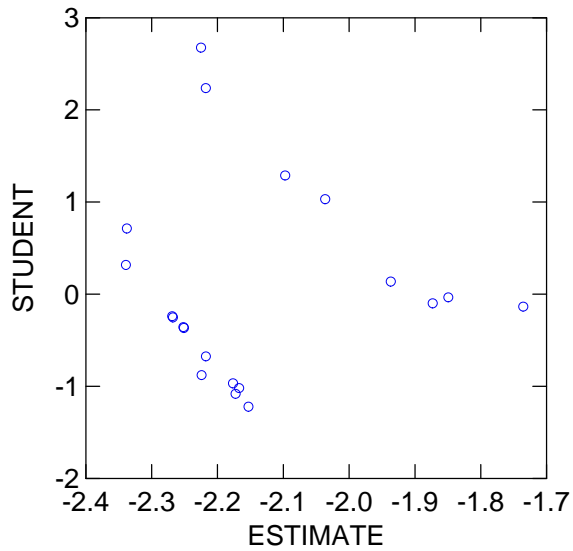
20 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	20
Minimum	-0.148187
Maximum	0.285652
Mean	0.000000
Standard Dev	0.120639

RES	
N of cases	20
Minimum	0.710907
Maximum	1.930420
Mean	1.040957
Standard Dev	0.334248

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Carpenterregr_nh30203.SYD, created Fri Jul 07, 2006 at 14:36:54, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 20 Multiple R: 0.906239 Squared multiple R: 0.821270

Adjusted squared multiple R: 0.738779 Standard error of estimate: 0.082540

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.530487	0.848266	0.000000	.	0.62538	0.54255
LFL_A	0.148890	0.415198	0.630545	0.004447	0.35860	0.72565
LFL_ASQ	-0.004124	0.049255	-0.147293	0.004442	-0.08372	0.93455
SIN_YF	-0.003803	0.075320	-0.009781	0.366253	-0.05049	0.96050
COS_YF	-0.069158	0.054168	-0.315428	0.225240	-1.27672	0.22404
SIN2_YF	0.139551	0.048970	0.601687	0.308402	2.84972	0.01366
COS2_YF	0.011806	0.034834	0.055004	0.521996	0.33892	0.74008

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.406966	6	0.067828	9.955880	0.000314
Residual	0.088567	13	0.006813		

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)
 Case 10 is an outlier (Studentized Residual = -4.257543)
 Case 10 has large influence (Cook distance = 8.318165)
 Case 11 is an outlier (Studentized Residual = 3.594620)

Durbin-Watson D Statistic 2.275626
 First Order Autocorrelation -0.151884

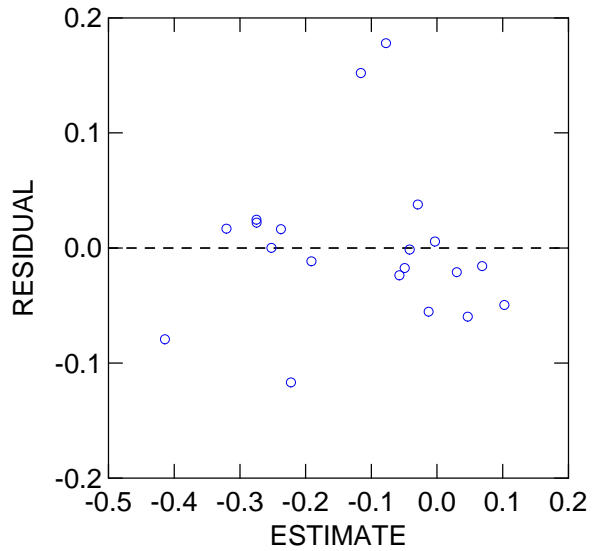
Residuals have been saved.

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)
 Case 10 is an outlier (Studentized Residual = -4.257543)
 Case 10 has large influence (Cook distance = 8.318165)
 Case 11 is an outlier (Studentized Residual = 3.594620)

Durbin-Watson D Statistic 2.275626
 First Order Autocorrelation -0.151884

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_TN0203.SYD, created Fri Jul 07, 2006 at 14:36:55, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

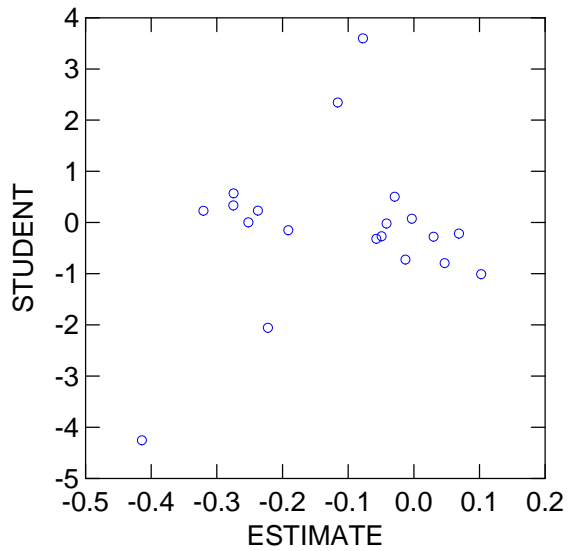
20 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	20
Minimum	-0.116890
Maximum	0.177827
Mean	0.000000
Standard Dev	0.068274

RES	
N of cases	20
Minimum	0.764029
Maximum	1.506005
Mean	1.012520
Standard Dev	0.174803

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Carpenterregr_tn0203.SYD,
 created Fri Jul 07, 2006 at 14:36:55, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

Dep Var: LTOC N: 20 Multiple R: 0.887998 Squared multiple R: 0.788540

Adjusted squared multiple R: 0.690943 Standard error of estimate: 0.075739

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	2.695328	0.778372	0.000000	.	3.46278	0.00420
LFL_A	0.974056	0.380987	4.889820	0.004447	2.55666	0.02389
LFL_ASQ	0.111814	0.045196	4.734063	0.004442	2.47396	0.02793
SIN_YF	0.057082	0.069114	0.174055	0.366253	0.82591	0.42375
COS_YF	0.191954	0.049705	1.037807	0.225240	3.86186	0.00196
SIN2_YF	-0.166838	0.044935	-0.852689	0.308402	-3.71284	0.00261
COS2_YF	0.028193	0.031964	0.155702	0.521996	0.88204	0.39377

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.278084	6	0.046347	8.079554	0.000875
Residual	0.074573	13	0.005736		

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)

Durbin-Watson D Statistic 0.916114
 First Order Autocorrelation 0.454970

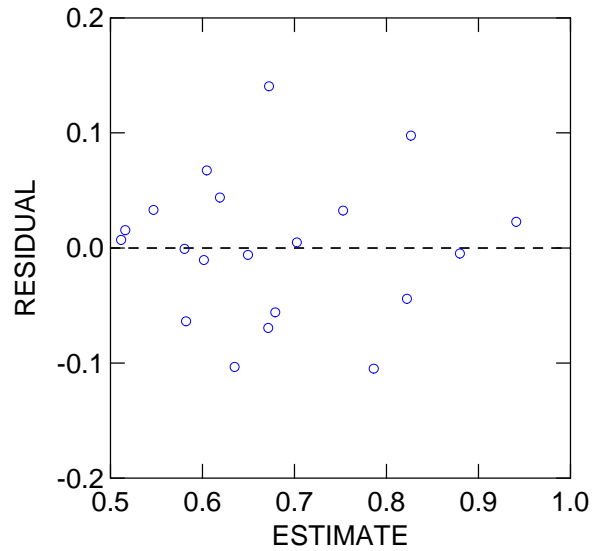
Residuals have been saved.

*** WARNING ***

Case 9 has large leverage (Leverage = 0.793860)
 Case 10 has large leverage (Leverage = 0.881575)

Durbin-Watson D Statistic 0.916114
 First Order Autocorrelation 0.454970

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_TOC0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

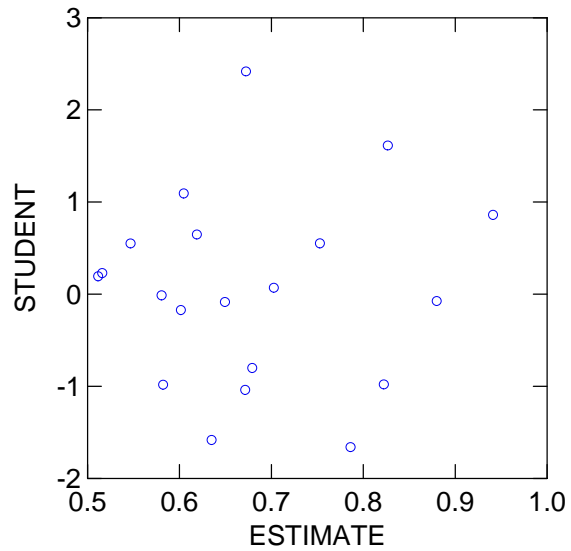
20 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	20
Minimum	-0.104959
Maximum	0.140502
Mean	0.000000
Standard Dev	0.062649

RES	
N of cases	20
Minimum	0.785309
Maximum	1.381979
Mean	1.010039
Standard Dev	0.148685

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Carpenterregr_toc0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

3 case(s) deleted due to missing data.

Dep Var: LCOND N: 17 Multiple R: 0.901339 Squared multiple R: 0.812412

Adjusted squared multiple R: 0.699859 Standard error of estimate: 0.069037

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.455186	0.989644	0.000000	.	1.47041	0.17220
LFL_A	-0.044969	0.496444	-0.206214	0.003619	-0.09058	0.92961
LFL_ASQ	0.020640	0.061766	0.770402	0.003529	0.33416	0.74516
SIN_YF	-0.293776	0.084753	-1.013107	0.219594	-3.46627	0.00606
COS_YF	0.071762	0.049156	0.416575	0.230382	1.45987	0.17502
SIN2_YF	0.129884	0.045859	0.736023	0.277776	2.83228	0.01778
COS2_YF	-0.003900	0.032260	-0.022978	0.519256	-0.12089	0.90617

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.206414	6	0.034402	7.218038	0.003476
Residual	0.047662	10	0.004766		

*** WARNING ***

Case 9 has large leverage (Leverage = 4.179899)
 Case 10 has large leverage (Leverage = 0.899017)
 Case 15 is an outlier (Studentized Residual = -2.817520)
 Case 20 has large leverage (Leverage = 2.004480)

Durbin-Watson D Statistic 1.077082

First Order Autocorrelation 0.412632

Residuals have been saved.

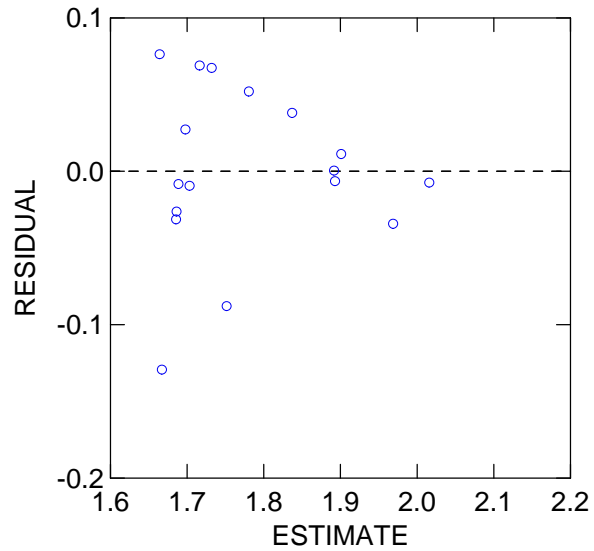
*** WARNING ***

Case 9 has large leverage (Leverage = 4.179899)
 Case 10 has large leverage (Leverage = 0.899017)
 Case 15 is an outlier (Studentized Residual = -2.817520)
 Case 20 has large leverage (Leverage = 2.004480)

Durbin-Watson D Statistic 1.077082

First Order Autocorrelation 0.412632

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\CarpenterREGR_COND0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

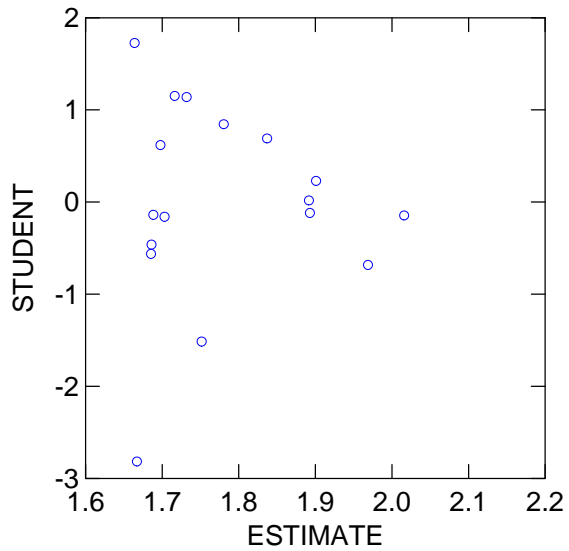
20 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	17
Minimum	-0.129363
Maximum	0.076194
Mean	0.000000
Standard Dev	0.054579

RES	
N of cases	17
Minimum	0.742399
Maximum	1.191774
Mean	1.007264
Standard Dev	0.122023

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Carpenterregr_cond0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 19 Multiple R: 0.961832 Squared multiple R: 0.925120

Adjusted squared multiple R: 0.887680 Standard error of estimate: 0.057495

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.224083	0.631881	0.000000	.	-0.35463	0.72902
LFL_A	-0.584382	0.303380	-2.281995	0.004446	-1.92624	0.07809
LFL_ASQ	-0.043792	0.035817	-1.458179	0.004387	-1.22264	0.24493
SIN_YF	-0.065841	0.069644	-0.158673	0.221512	-0.94539	0.36311
COS_YF	-0.024734	0.040716	-0.105013	0.208822	-0.60749	0.55485
SIN2_YF	0.024997	0.035673	0.100308	0.304518	0.70073	0.49684
COS2_YF	0.012540	0.024907	0.055734	0.509227	0.50348	0.62374

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.490090	6	0.081682	24.709447	0.000004
Residual	0.039668	12	0.003306		

*** WARNING ***

Case 9 has large leverage (Leverage = 0.805968)
 Case 10 has large leverage (Leverage = 0.882207)
 Case 16 is an outlier (Studentized Residual = -3.788980)
 Case 20 has large leverage (Leverage = 1.827888)

Durbin-Watson D Statistic 2.100910
 First Order Autocorrelation -0.070547

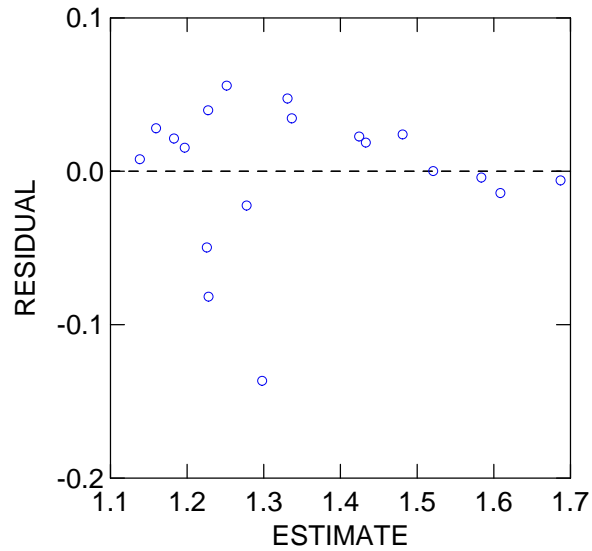
Residuals have been saved.

*** WARNING ***

Case 9 has large leverage (Leverage = 0.805968)
 Case 10 has large leverage (Leverage = 0.882207)
 Case 16 is an outlier (Studentized Residual = -3.788980)
 Case 20 has large leverage (Leverage = 1.827888)

Durbin-Watson D Statistic 2.100910
 First Order Autocorrelation -0.070547

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\sysstat\CarpenterREGR_ALK0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

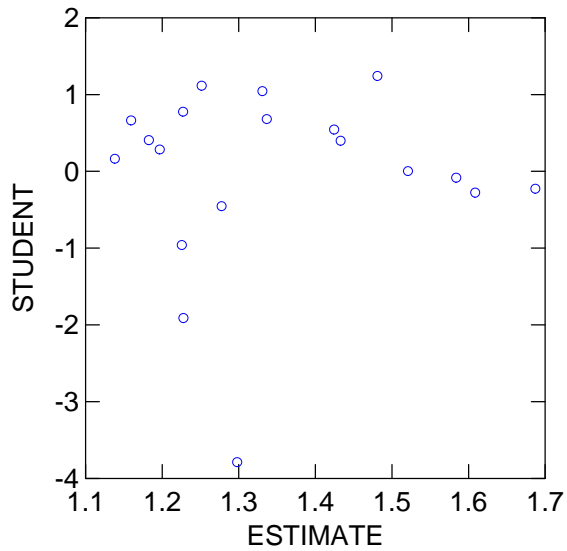
20 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	19
Minimum	-0.136614
Maximum	0.055790
Mean	0.000000
Standard Dev	0.046945

RES	
N of cases	19
Minimum	0.730106
Maximum	1.137078
Mean	1.005261
Standard Dev	0.100543

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Carpenterregr_alk0203.SYD, created Fri Jul 07, 2006 at 14:36:56, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Euclid Creek

Nitrate/Nitrite

Dep Var: LNO N: 24 Multiple R: 0.777278 Squared multiple R: 0.604160

Adjusted squared multiple R: 0.464452 Standard error of estimate: 0.269352

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.537405	1.768130	0.000000	.	0.86951	0.39668
LFL_A	0.896102	0.755269	2.387726	0.005749	1.18647	0.25175
LFL_ASQ	0.082636	0.077303	2.232024	0.005341	1.06899	0.30002
SIN_YF	0.587095	0.228285	0.875748	0.200805	2.57176	0.01980
COS_YF	0.192190	0.204676	0.381910	0.140758	0.93899	0.36089
SIN2_YF	0.006702	0.148327	0.012946	0.283675	0.04519	0.96449
COS2_YF	0.277483	0.130421	0.550628	0.347639	2.12759	0.04830

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.882447	6	0.313741	4.324447	0.007916
Residual	1.233360	17	0.072551		

*** WARNING ***

Case 11 is an outlier (Studentized Residual = -6.569555)
 Case 12 is an outlier (Studentized Residual = 5.936726)

Durbin-Watson D Statistic 2.695144
 First Order Autocorrelation -0.375733

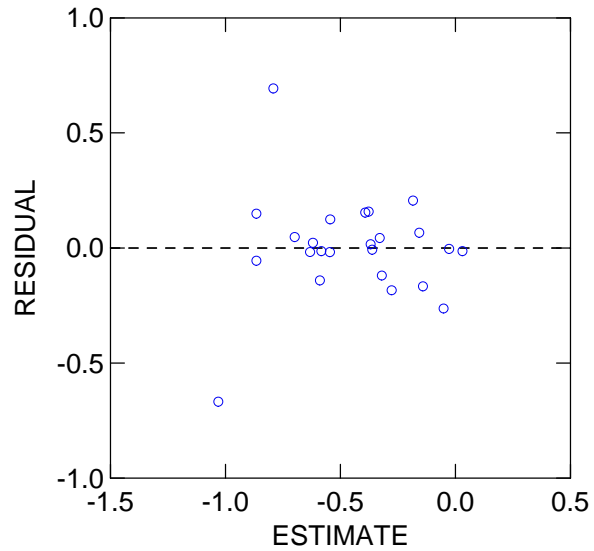
Residuals have been saved.

*** WARNING ***

Case 11 is an outlier (Studentized Residual = -6.569555)
 Case 12 is an outlier (Studentized Residual = 5.936726)

Durbin-Watson D Statistic 2.695144
 First Order Autocorrelation -0.375733

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_NO30203.SYD, created Mon Jul 10, 2006 at 13:20:57, contains variables:

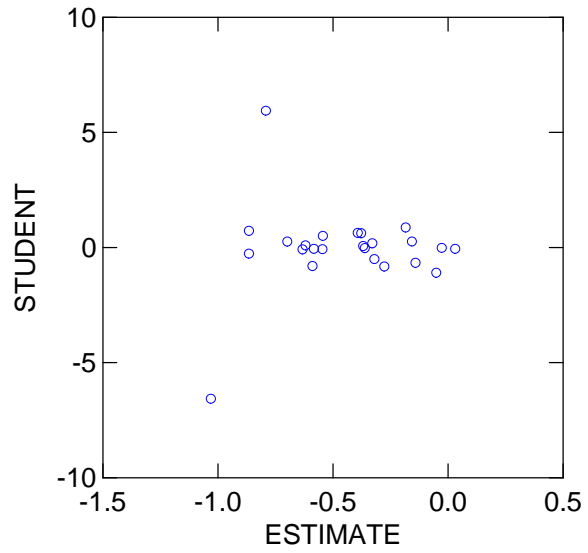
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

24 cases and 14 variables processed and saved.

RES	
N of cases	24
Minimum	0.214699
Maximum	4.930595
Mean	1.162069
Standard Dev	0.861902

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_NO30203.SYD,
created Mon Jul 10, 2006 at 13:20:57, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 24 Multiple R: 0.598385 Squared multiple R: 0.358065

Adjusted squared multiple R: 0.131499 Standard error of estimate: 0.265270

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-2.446853	1.741331	0.000000	.	-1.40516	0.17798
LFL_A	-0.449043	0.743821	-1.547154	0.005749	-0.60370	0.55402
LFL_ASQ	-0.070446	0.076131	-2.460389	0.005341	-0.92532	0.36775
SIN_YF	-0.272434	0.224825	-0.525474	0.200805	-1.21176	0.24218
COS_YF	-0.480538	0.201574	-1.234748	0.140758	-2.38393	0.02905
SIN2_YF	0.303839	0.146079	0.758867	0.283675	2.07996	0.05297
COS2_YF	0.112482	0.128444	0.288620	0.347639	0.87573	0.39338

Analysis of Variance

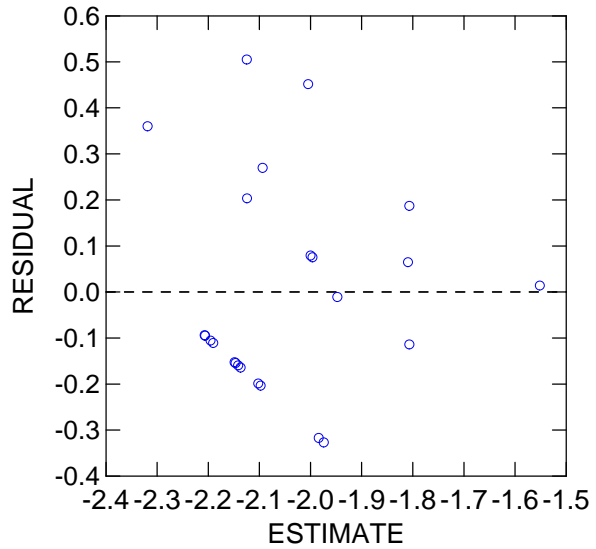
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.667258	6	0.111210	1.580402	0.213015
Residual	1.196255	17	0.070368		

Durbin-Watson D Statistic 1.753555
 First Order Autocorrelation -0.006743

Residuals have been saved.

Durbin-Watson D Statistic 1.753555
 First Order Autocorrelation -0.006743

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_NH30203.SYD, created Mon Jul 10, 2006 at 13:20:57, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

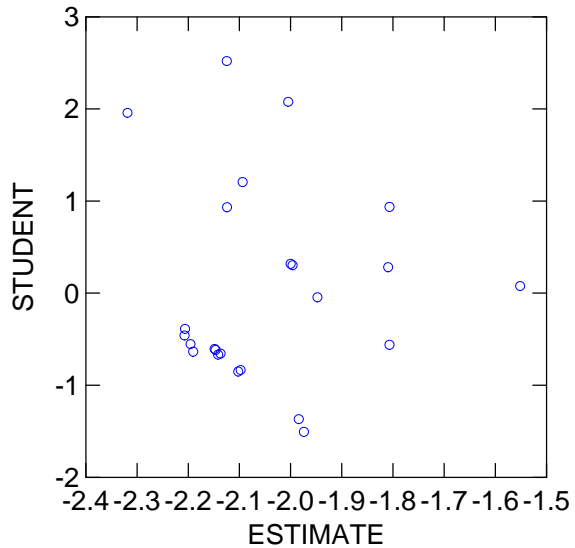
24 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.327066
Maximum	0.504772
Mean	0.000000
Standard Dev	0.228059

RES	
N of cases	24
Minimum	0.470906
Maximum	3.197214
Mean	1.158196
Standard Dev	0.726756

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Euclidregr_nh30203.SYD,
 created Mon Jul 10, 2006 at 13:20:57, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 24 Multiple R: 0.845555 Squared multiple R: 0.714964

Adjusted squared multiple R: 0.614363 Standard error of estimate: 0.132991

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.656714	0.873002	0.000000	.	1.89772	0.07485
LFL_A	0.749931	0.372909	3.434293	0.005749	2.01103	0.06046
LFL_ASQ	0.062646	0.038168	2.908133	0.005341	1.64134	0.11910
SIN_YF	0.220101	0.112714	0.564264	0.200805	1.95274	0.06752
COS_YF	0.075439	0.101058	0.257642	0.140758	0.74649	0.46557
SIN2_YF	0.017488	0.073236	0.058054	0.283675	0.23879	0.81412
COS2_YF	0.142776	0.064395	0.486932	0.347639	2.21721	0.04053

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.754182	6	0.125697	7.106934	0.000645
Resid	0.30067		0.01768		

*** WARNING ***

Case 11 is an outlier (Studentized Residual = -4.172090)
 Case 12 is an outlier (Studentized Residual = 5.061981)

Durbin-Watson D Statistic 2.712964
 First Order Autocorrelation -0.396905

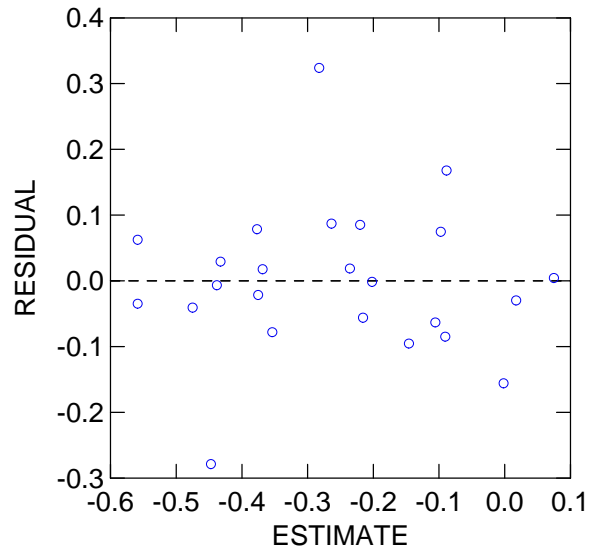
Residuals have been saved.

*** WARNING ***

Case 11 is an outlier (Studentized Residual = -4.172090)
 Case 12 is an outlier (Studentized Residual = 5.061981)

Durbin-Watson D Statistic 2.712964
 First Order Autocorrelation -0.396905

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_TN0203.SYD, created Mon Jul 10, 2006 at 13:20:57, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

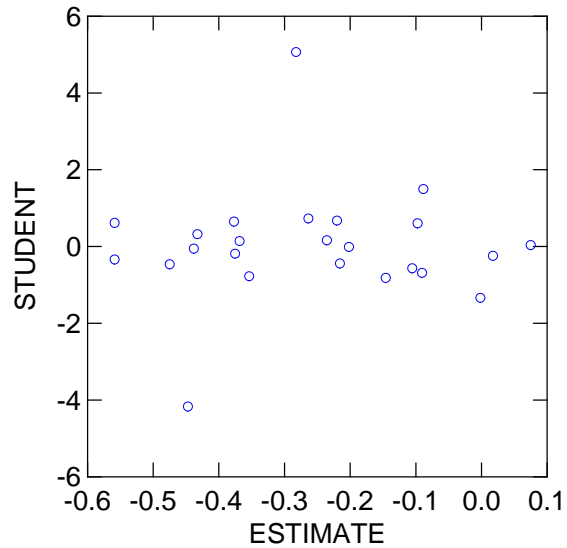
24 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.278806
Maximum	0.323667
Mean	0.000000
Standard Dev	0.114336

RES	
N of cases	24
Minimum	0.526253
Maximum	2.107014
Mean	1.035295
Standard Dev	0.301245

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Euclidregr_tn0203.SYD,
 created Mon Jul 10, 2006 at 13:20:57, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

1 case(s) deleted due to missing data.

Dep Var: LTOC N: 23 Multiple R: 0.895873 Squared multiple R: 0.802589

Adjusted squared multiple R: 0.728560 Standard error of estimate: 0.081750

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	2.797241	0.573954	0.000000	.	4.87363	0.00017
LFL_A	0.816289	0.243966	5.213779	0.005081	3.34591	0.00410
LFL_ASQ	0.072786	0.024678	4.709801	0.004838	2.94939	0.00942
SIN_YF	-0.141229	0.069621	-0.497086	0.205471	-2.02853	0.05949
COS_YF	0.037885	0.062301	0.179413	0.141738	0.60810	0.55166
SIN2_YF	-0.080360	0.046368	-0.360667	0.284898	-1.73311	0.10230
COS2_YF	-0.005417	0.042085	-0.025284	0.319774	-0.12872	0.89918

Analysis of Variance

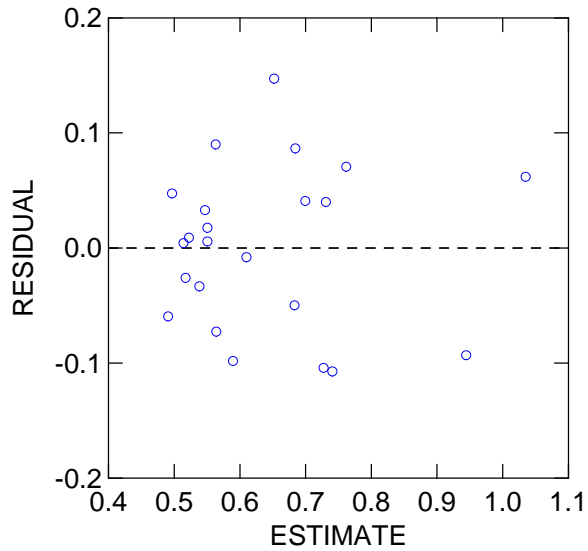
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.434731	6	0.072455	10.841546	0.000071
Residual	0.106930	16	0.006683		

Durbin-Watson D Statistic 1.889503
 First Order Autocorrelation -0.010266

Residuals have been saved.

Durbin-Watson D Statistic 1.889503
 First Order Autocorrelation -0.010266

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_TOC0203.SYD, created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

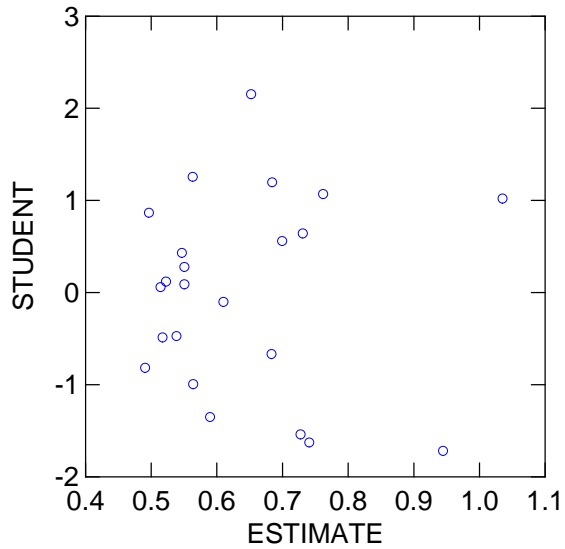
24 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	23
Minimum	-0.107351
Maximum	0.147067
Mean	0.000000
Standard Dev	0.069717

RES	
N of cases	23
Minimum	0.780995
Maximum	1.403031
Mean	1.012427
Standard Dev	0.163573

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Euclidregr_toc0203.SYD,
 created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

4 case(s) deleted due to missing data.

Dep Var: LCOND N: 20 Multiple R: 0.828985 Squared multiple R: 0.687216

Adjusted squared multiple R: 0.542855 Standard error of estimate: 0.075428

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	0.637121	0.692816	0.000000	.	0.91961	0.37453
LFL_A	-0.534074	0.281388	-4.747823	0.003845	-1.89800	0.08012
LFL_ASQ	-0.051832	0.027348	-4.766433	0.003804	-1.89529	0.08051
SIN_YF	-0.116366	0.068428	-0.543041	0.235952	-1.70057	0.11281
COS_YF	-0.077347	0.058140	-0.525063	0.154460	-1.33036	0.20627
SIN2_YF	0.026723	0.042981	0.171311	0.316920	0.62174	0.54486
COS2_YF	0.012667	0.039531	0.082827	0.360110	0.32044	0.75373

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.162500	6	0.027083	4.760379	0.008892
Residual	0.073961	13	0.005689		

*** WARNING ***

Case 5 has large leverage (Leverage = 0.768428)
 Case 11 has large leverage (Leverage = 0.789733)
 Case 12 has large leverage (Leverage = 0.929708)

Durbin-Watson D Statistic 1.011475
 First Order Autocorrelation 0.445985

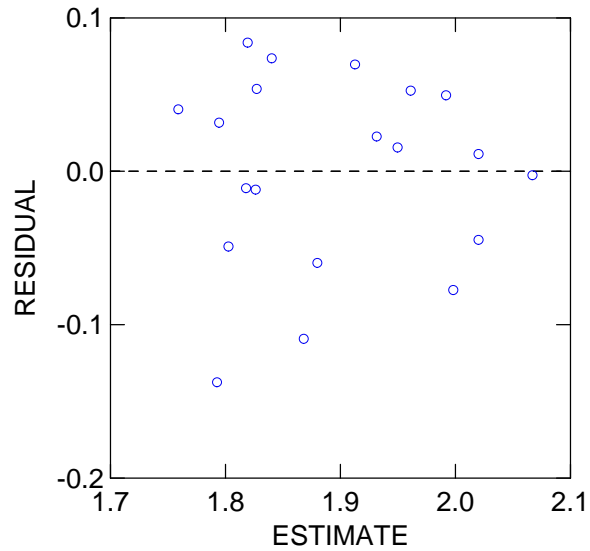
Residuals have been saved.

*** WARNING ***

Case 5 has large leverage (Leverage = 0.768428)
 Case 11 has large leverage (Leverage = 0.789733)
 Case 12 has large leverage (Leverage = 0.929708)

Durbin-Watson D Statistic 1.011475
 First Order Autocorrelation 0.445985

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_COND0203.SYD, created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

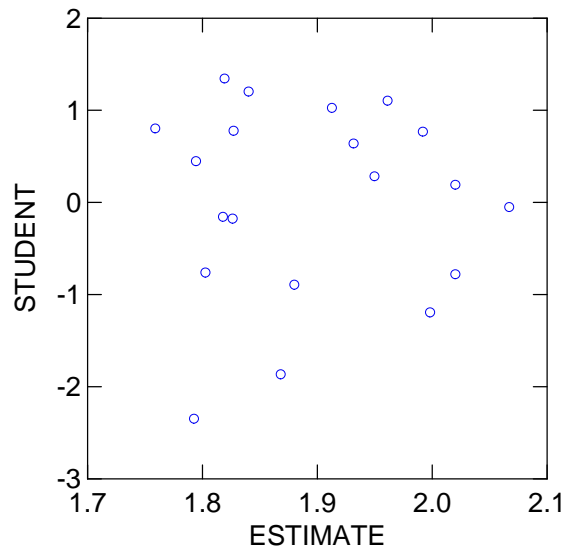
24 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	20
Minimum	-0.137559
Maximum	0.083758
Mean	0.000000
Standard Dev	0.062391

RES	
N of cases	20
Minimum	0.728519
Maximum	1.212714
Mean	1.009543
Standard Dev	0.138567

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Euclidregr_cond0203.SYD,
 created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 23 Multiple R: 0.971776 Squared multiple R: 0.944348

Adjusted squared multiple R: 0.923479 Standard error of estimate: 0.038796

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.202026	0.271047	0.000000	.	-0.74535	0.46687
LFL_A	-0.643988	0.114480	-4.517303	0.005394	-5.62536	0.00004
LFL_ASQ	-0.056365	0.011567	-4.026336	0.005095	-4.87298	0.00017
SIN_YF	-0.098798	0.033183	-0.395433	0.197185	-2.97736	0.00889
COS_YF	-0.066997	0.029493	-0.346222	0.149740	-2.27166	0.03726
SIN2_YF	-0.017789	0.021380	-0.088863	0.304951	-0.83207	0.41762
COS2_YF	-0.017171	0.020032	-0.090327	0.313221	-0.85717	0.40401

Analysis of Variance

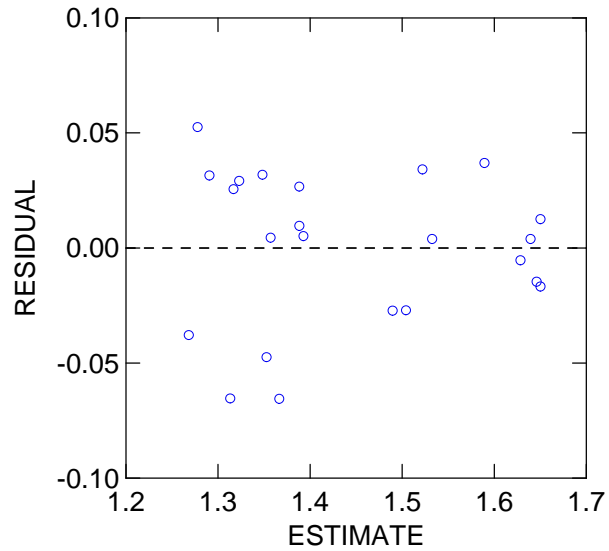
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.408650	6	0.068108	45.250484	0.000000
Residual	0.024082	16	0.001505		

Durbin-Watson D Statistic 2.455847
 First Order Autocorrelation -0.251723

Residuals have been saved.

Durbin-Watson D Statistic 2.455847
 First Order Autocorrelation -0.251723

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\EuclidREGR_ALK0203.SYD, created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

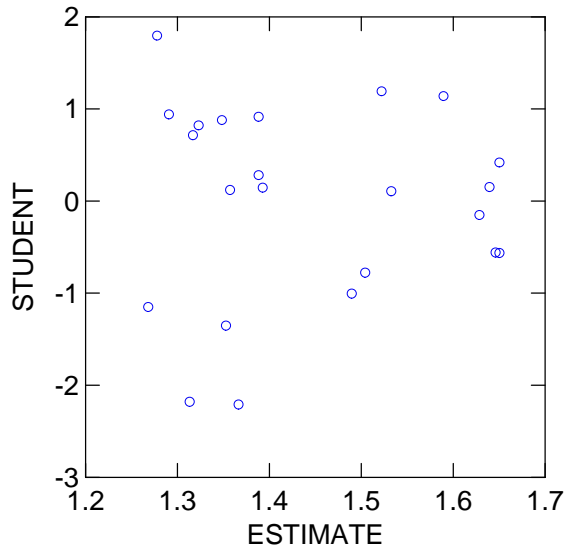
24 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	23
Minimum	-0.065561
Maximum	0.052487
Mean	0.000000
Standard Dev	0.033085

RES	
N of cases	23
Minimum	0.859882
Maximum	1.128462
Mean	1.002742
Standard Dev	0.074911

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Euclidregr_alk0203.SYD,
 created Mon Jul 10, 2006 at 13:20:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Mill Wheel Creek

Nitrate/Nitrite

Dep Var: LNO N: 18 Multiple R: 0.974125 Squared multiple R: 0.948919

Adjusted squared multiple R: 0.921057 Standard error of estimate: 0.165863

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	10.751076	4.957600	0.000000	.	2.16861	0.05291
LFL_A	6.376121	3.015386	5.500537	0.000686	2.11453	0.05812
LFL_ASQ	0.808008	0.409359	5.715922	0.000554	1.97384	0.07404
SIN_YF	1.281566	0.890008	0.811099	0.014636	1.43995	0.17773
COS_YF	1.399235	0.518854	1.641403	0.012535	2.69678	0.02078
SIN2_YF	-0.379032	0.288956	-0.455780	0.038463	-1.31173	0.21633
COS2_YF	-0.059229	0.213417	-0.074471	0.064491	-0.27753	0.78652

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	5.621687	6	0.936948	34.057723	0.000002
Residual	0.302616	11	0.027511		

*** WARNING ***

Case 8 has large leverage (Leverage = 0.844489)
 Case 8 is an outlier (Studentized Residual = 5.726879)
 Case 8 has large influence (Cook distance = 6.539565)
 Case 9 has large leverage (Leverage = 0.913532)
 Case 9 is an outlier (Studentized Residual = -2.881675)
 Case 9 has large influence (Cook distance = 7.531960)
 Case 10 is an outlier (Studentized Residual = 2.647960)

Durbin-Watson D Statistic 2.403775
 First Order Autocorrelation -0.272765

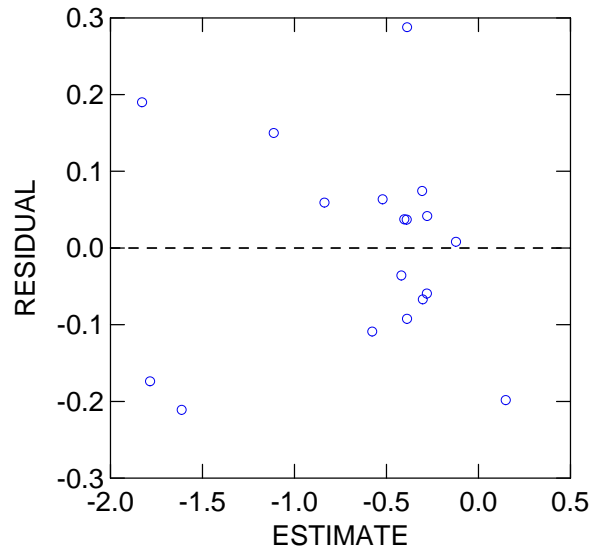
Residuals have been saved.

*** WARNING ***

Case 8 has large leverage (Leverage = 0.844489)
 Case 8 is an outlier (Studentized Residual = 5.726879)
 Case 8 has large influence (Cook distance = 6.539565)
 Case 9 has large leverage (Leverage = 0.913532)
 Case 9 is an outlier (Studentized Residual = -2.881675)
 Case 9 has large influence (Cook distance = 7.531960)
 Case 10 is an outlier (Studentized Residual = 2.647960)

Durbin-Watson D Statistic 2.403775
 First Order Autocorrelation -0.272765

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_NO30203.SYD, created Mon Jul 10, 2006 at 14:48:24, contains variables:

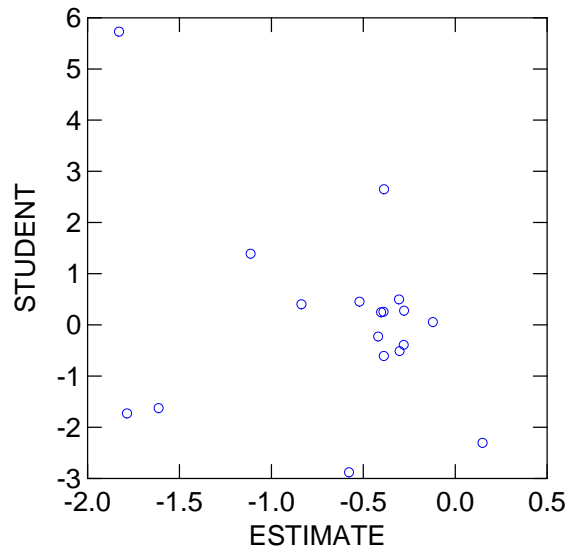
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

18 cases and 14 variables processed and saved.

RES	
N of cases	18
Minimum	0.615065
Maximum	1.939013
Mean	1.046612
Standard Dev	0.337849

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_NO30203.SYD, created Mon Jul 10, 2006 at 14:48:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 18 Multiple R: 0.878999 Squared multiple R: 0.772639

Adjusted squared multiple R: 0.648624 Standard error of estimate: 0.287041

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.860981	8.579568	0.000000	.	-0.10035	0.92187
LFL_A	0.166416	5.218393	0.175017	0.000686	0.03189	0.97513
LFL_ASQ	0.059683	0.708433	0.514707	0.000554	0.08425	0.93437
SIN_YF	-1.873140	1.540239	-1.445239	0.014636	-1.21614	0.24939
COS_YF	-0.031248	0.897923	-0.044687	0.012535	-0.03480	0.97286
SIN2_YF	0.206260	0.500064	0.302365	0.038463	0.41247	0.68792
COS2_YF	-0.539486	0.369338	-0.826928	0.064491	-1.46069	0.17207

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	3.079929	6	0.513322	6.230198	0.004612
Residual	0.906317	11	0.082392		

*** WARNING ***

Case 5 is an outlier (Studentized Residual = 3.202111)
 Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)

Durbin-Watson D Statistic 1.121146
 First Order Autocorrelation 0.419033

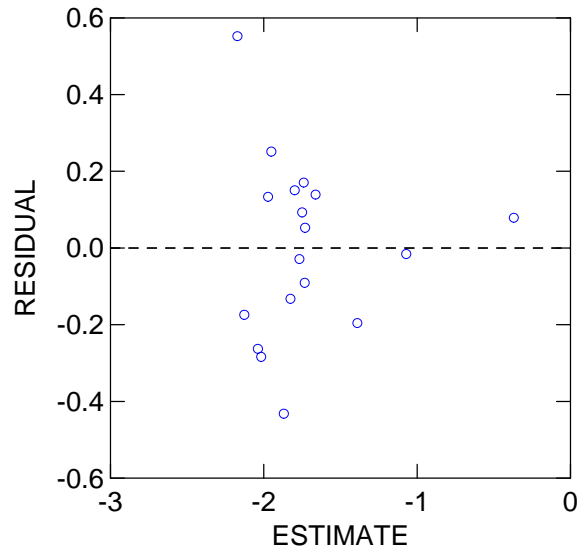
Residuals have been saved.

*** WARNING ***

Case 5 is an outlier (Studentized Residual = 3.202111)
 Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)

Durbin-Watson D Statistic 1.121146
 First Order Autocorrelation 0.419033

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_NH30203.SYD, created Mon Jul 10, 2006 at 14:48:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

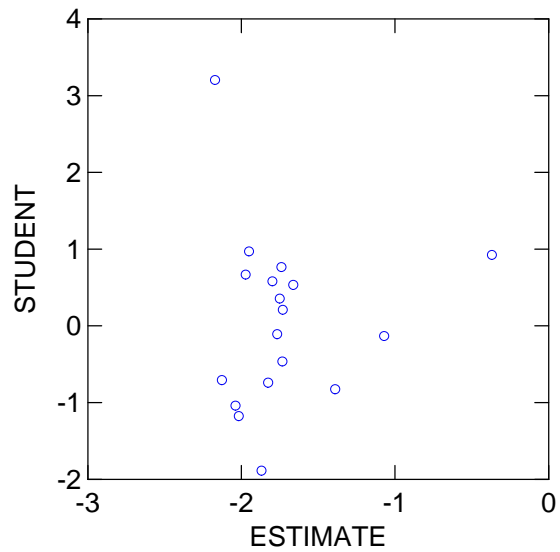
18 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	18
Minimum	-0.432212
Maximum	0.551915
Mean	0.000000
Standard Dev	0.230896

RES	
N of cases	18
Minimum	0.369647
Maximum	3.563817
Mean	1.151470
Standard Dev	0.717141

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelregr_nh30203.SYD, created Mon Jul 10, 2006 at 14:48:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 18 Multiple R: 0.914154 Squared multiple R: 0.835677

Adjusted squared multiple R: 0.746046 Standard error of estimate: 0.099453

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.254863	2.972606	0.000000	.	0.42214	0.68105
LFL_A	-0.098355	1.808043	-0.253805	0.000686	-0.05440	0.95759
LFL_ASQ	-0.060867	0.245454	-1.287968	0.000554	-0.24798	0.80872
SIN_YF	-1.372002	0.533654	-2.597430	0.014636	-2.57096	0.02601
COS_YF	-0.431002	0.311108	-1.512376	0.012535	-1.38538	0.19339
SIN2_YF	0.366313	0.173260	1.317613	0.038463	2.11425	0.05815
COS2_YF	-0.331524	0.127966	-1.246872	0.064491	-2.59072	0.02511

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.553304	6	0.092217	9.323541	0.000878
Residual	0.108799	11	0.009891		

*** WARNING ***

Case 6 is an outlier (Studentized Residual = 3.555205)
 Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)
 Case 17 is an outlier (Studentized Residual = -2.732306)

Durbin-Watson D Statistic 1.059844
 First Order Autocorrelation 0.457997

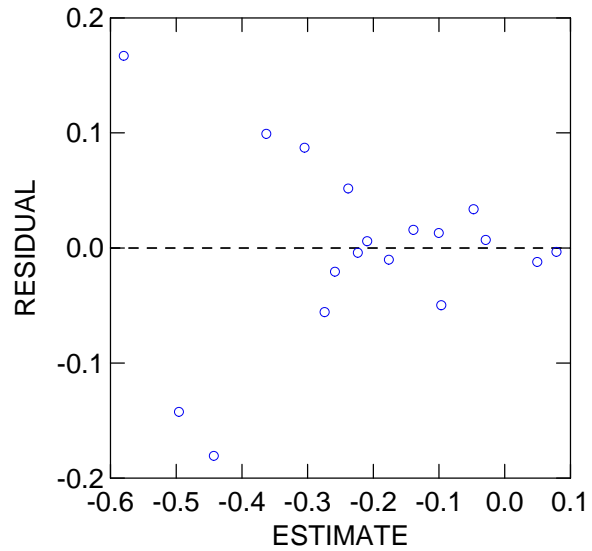
Residuals have been saved.

*** WARNING ***

Case 6 is an outlier (Studentized Residual = 3.555205)
 Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)
 Case 17 is an outlier (Studentized Residual = -2.732306)

Durbin-Watson D Statistic 1.059844
 First Order Autocorrelation 0.457997

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_TN0203.SYD, created Mon Jul 10, 2006 at 14:48:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

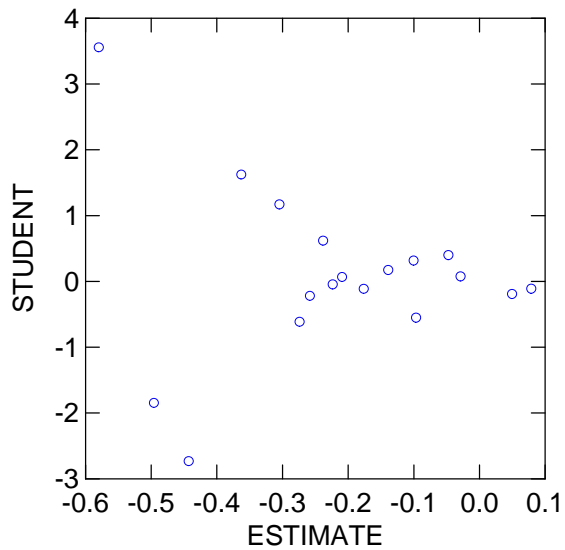
18 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	18
Minimum	-0.180730
Maximum	0.166868
Mean	0.000000
Standard Dev	0.080000

RES	
N of cases	18
Minimum	0.659584
Maximum	1.468478
Mean	1.015880
Standard Dev	0.184549

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelregr_tn0203.SYD,
 created Mon Jul 10, 2006 at 14:48:24, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPPRED
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

Dep Var: LTOC N: 18 Multiple R: 0.850576 Squared multiple R: 0.723479

Adjusted squared multiple R: 0.572650 Standard error of estimate: 0.080563

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.336385	2.408006	0.000000	.	0.55498	0.59002
LFL_A	-0.054273	1.464634	-0.224274	0.000686	-0.03706	0.97110
LFL_ASQ	-0.030146	0.198834	-1.021533	0.000554	-0.15161	0.88224
SIN_YF	-0.522325	0.432295	-1.583521	0.014636	-1.20826	0.25228
COS_YF	-0.091962	0.252018	-0.516753	0.012535	-0.36490	0.72210
SIN2_YF	-0.016165	0.140352	-0.093109	0.038463	-0.11517	0.91038
COS2_YF	-0.080665	0.103661	-0.485829	0.064491	-0.77816	0.45289

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.186794	6	0.031132	4.796673	0.012187
Residual	0.071395	11	0.006490		

*** WARNING ***

Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)

Durbin-Watson D Statistic 1.541572
 First Order Autocorrelation 0.115065

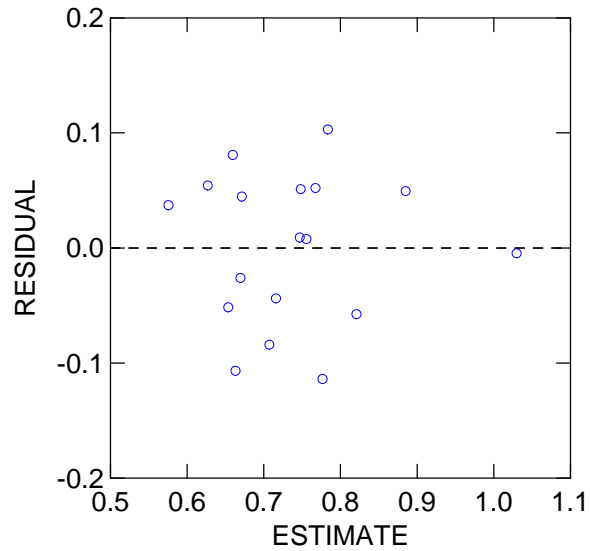
Residuals have been saved.

*** WARNING ***

Case 8 has large leverage (Leverage = 0.844489)
 Case 9 has large leverage (Leverage = 0.913532)

Durbin-Watson D Statistic 1.541572
 First Order Autocorrelation 0.115065

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_TOC0203.SYD, created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

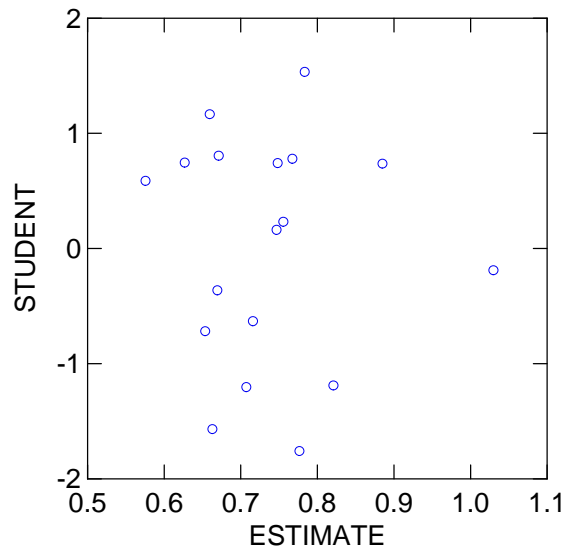
18 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	18
Minimum	-0.113948
Maximum	0.102897
Mean	0.000000
Standard Dev	0.064805

RES	
N of cases	18
Minimum	0.769223
Maximum	1.267351
Mean	1.010391
Standard Dev	0.147178

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelregr_toc0203.SYD, created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

2 case(s) deleted due to missing data.

Dep Var: LCOND N: 16 Multiple R: 0.931071 Squared multiple R: 0.866893

Adjusted squared multiple R: 0.778155 Standard error of estimate: 0.065637

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.162085	2.751536	0.000000	.	0.42234	0.68269
LFL_A	-0.353358	1.613394	-1.213761	0.000482	-0.21902	0.83152
LFL_ASQ	-0.023829	0.214449	-0.685227	0.000389	-0.11112	0.91396
SIN_YF	-0.396757	0.412689	-1.094289	0.011416	-0.96139	0.36147
COS_YF	-0.113191	0.242893	-0.574454	0.009733	-0.46601	0.65228
SIN2_YF	0.079960	0.133443	0.413767	0.031018	0.59921	0.56381
COS2_YF	-0.100095	0.096587	-0.530434	0.056453	-1.03632	0.32709

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.252522	6	0.042087	9.769108	0.001626
Residual	0.038774	9	0.004308		

*** WARNING ***

Case 8 has large leverage (Leverage = 0.900919)
 Case 9 has large leverage (Leverage = 0.921448)
 Case 9 has large influence (Cook distance = 4.721639)
 Case 18 has large leverage (Leverage = 1.853654)

Durbin-Watson D Statistic 1.142208
 First Order Autocorrelation 0.332534

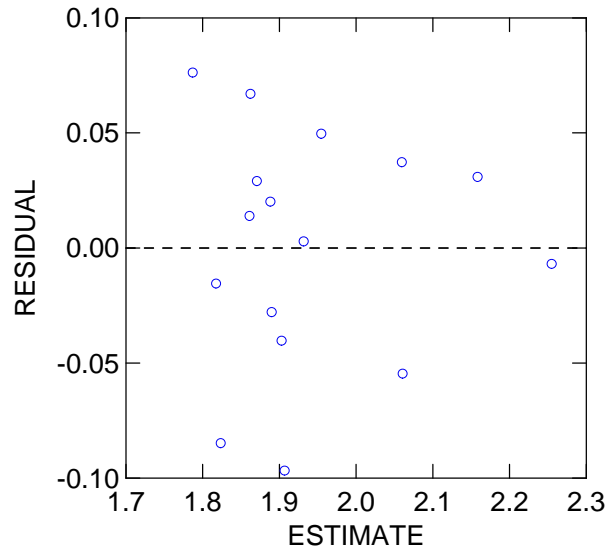
Residuals have been saved.

*** WARNING ***

Case 8 has large leverage (Leverage = 0.900919)
 Case 9 has large leverage (Leverage = 0.921448)
 Case 9 has large influence (Cook distance = 4.721639)
 Case 18 has large leverage (Leverage = 1.853654)

Durbin-Watson D Statistic 1.142208
 First Order Autocorrelation 0.332534

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_COND0203.SYD, created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

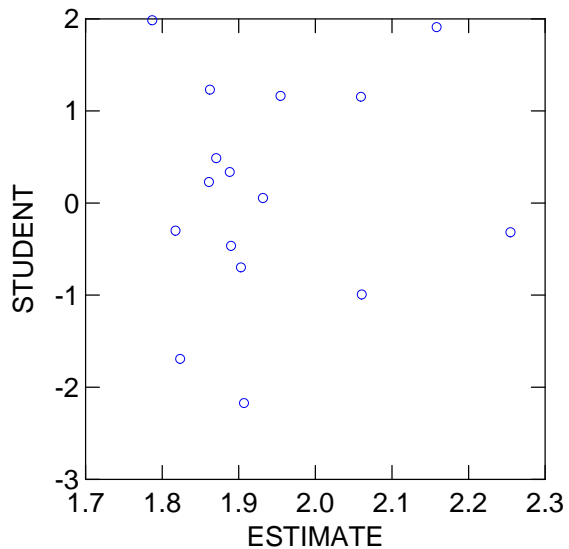
18 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	16
Minimum	-0.096744
Maximum	0.076164
Mean	0.000000
Standard Dev	0.050842

RES	
N of cases	16
Minimum	0.800305
Maximum	1.191691
Mean	1.006339
Standard Dev	0.115094

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelregr_cond0203.SYD, created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 17 Multiple R: 0.976257 Squared multiple R: 0.953077

Adjusted squared multiple R: 0.924923 Standard error of estimate: 0.044757

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.669753	1.825054	0.000000	.	-0.36698	0.72128
LFL_A	-1.205870	1.080333	-3.584705	0.000455	-1.11620	0.29044
LFL_ASQ	-0.136896	0.144171	-3.387179	0.000369	-0.94954	0.36473
SIN_YF	-0.600240	0.281396	-1.407109	0.010783	-2.13308	0.05872
COS_YF	-0.282837	0.165526	-1.191153	0.009656	-1.70872	0.11830
SIN2_YF	0.122067	0.090689	0.524798	0.030867	1.34600	0.20802
COS2_YF	-0.137139	0.065646	-0.628542	0.051835	-2.08907	0.06323

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.406876	6	0.067813	33.852627	0.000004
Residual	0.020032	10	0.002003		

*** WARNING ***

Case 8 has large leverage (Leverage = 0.896750)
 Case 9 has large leverage (Leverage = 0.921137)
 Case 9 has large influence (Cook distance = 6.102677)
 Case 10 is an outlier (Studentized Residual = -3.134172)
 Case 18 has large leverage (Leverage = 1.670941)

Durbin-Watson D Statistic 1.999407
 First Order Autocorrelation -0.082582

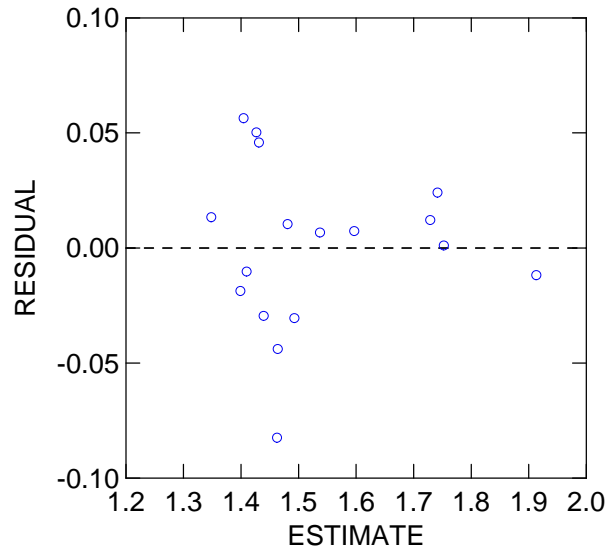
Residuals have been saved.

*** WARNING ***

Case 8 has large leverage (Leverage = 0.896750)
 Case 9 has large leverage (Leverage = 0.921137)
 Case 9 has large influence (Cook distance = 6.102677)
 Case 10 is an outlier (Studentized Residual = -3.134172)
 Case 18 has large leverage (Leverage = 1.670941)

Durbin-Watson D Statistic 1.999407
 First Order Autocorrelation -0.082582

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelREGR_ALK0203.SYD, created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

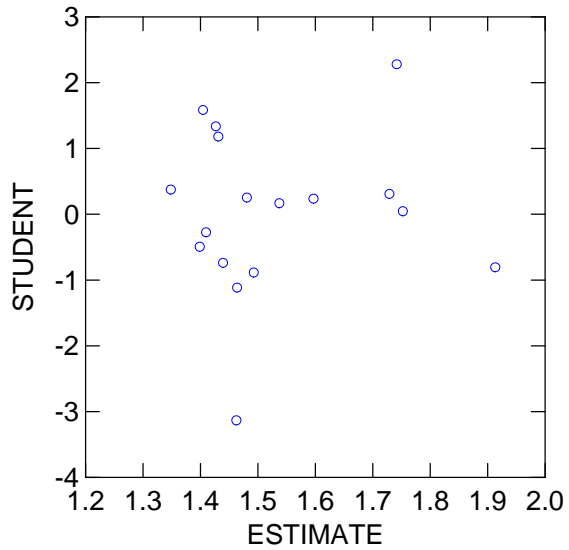
18 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	17
Minimum	-0.082487
Maximum	0.056333
Mean	0.000000
Standard Dev	0.035383

RES	
N of cases	17
Minimum	0.827015
Maximum	1.138501
Mean	1.003094
Standard Dev	0.080499

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\MillWheelregr_alk0203.SYD,
 created Mon Jul 10, 2006 at 14:48:26, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Olsen Creek

Nitrate/Nitrite

Dep Var: LNO N: 31 Multiple R: 0.746610 Squared multiple R: 0.557427

Adjusted squared multiple R: 0.446784 Standard error of estimate: 0.171442

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.257600	1.260854	0.000000	.	-0.99742	0.32851
LFL_A	-0.717732	0.686718	-2.192591	0.004190	-1.04516	0.30636
LFL_ASQ	-0.106673	0.091688	-2.629404	0.003610	-1.16343	0.25609
SIN_YF	-0.007465	0.098383	-0.023189	0.197423	-0.07588	0.94015
COS_YF	0.139179	0.074296	0.403665	0.397149	1.87332	0.07325
SIN2_YF	0.058205	0.057076	0.174349	0.630877	1.01977	0.31801
COS2_YF	-0.006514	0.049456	-0.020729	0.744431	-0.13170	0.89632

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.888479	6	0.148080	5.038059	0.001803
Residual	0.705414	24	0.029392		

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -4.305983)
 Case 16 is an outlier (Studentized Residual = 3.422752)

Durbin-Watson D Statistic 2.379380
 First Order Autocorrelation -0.204040

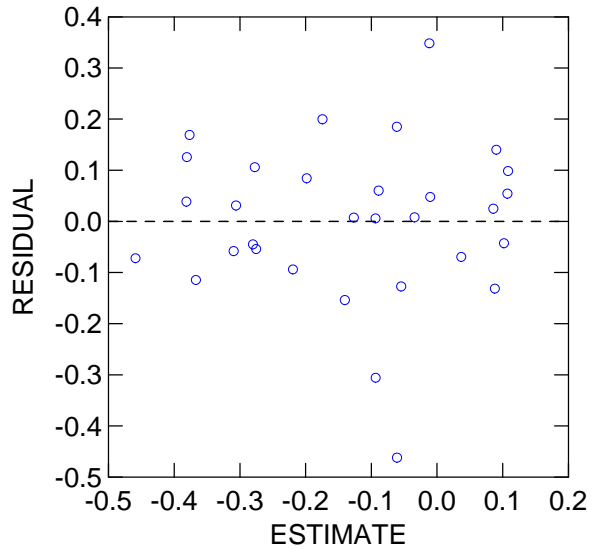
Residuals have been saved.

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -4.305983)
 Case 16 is an outlier (Studentized Residual = 3.422752)

Durbin-Watson D Statistic 2.379380
 First Order Autocorrelation -0.204040

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_NO30203.SYD, created Tue Jul 11, 2006 at 13:28:48, contains variables:

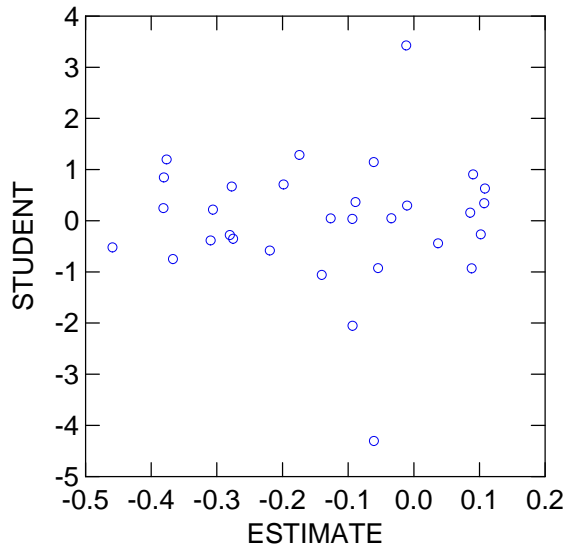
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

31 cases and 14 variables processed and saved.

RES	
N of cases	31
Minimum	0.345046
Maximum	2.228148
Mean	1.058346
Standard Dev	0.358531

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_NO30203.SYD,
created Tue Jul 11, 2006 at 13:28:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

2 case(s) deleted due to missing data.

Dep Var: LNH3 N: 29 Multiple R: 0.388954 Squared multiple R: 0.151285

Adjusted squared multiple R: 0.000000 Standard error of estimate: 0.234558

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-3.428006	1.962992	0.000000	.	-1.74632	0.09471
LFL_A	-0.529895	1.042810	-1.601503	0.003884	-0.50814	0.61641
LFL_ASQ	-0.053852	0.136319	-1.329506	0.003406	-0.39504	0.69661
SIN_YF	0.030288	0.134950	0.095864	0.211457	0.22444	0.82449
COS_YF	0.138875	0.102730	0.424875	0.390547	1.35185	0.19016
SIN2_YF	-0.078133	0.079230	-0.244789	0.626106	-0.98616	0.33478
COS2_YF	0.035647	0.067998	0.114816	0.804237	0.52423	0.60536

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.215753	6	0.035959	0.653589	0.687076
Residual	1.210384	22	0.055017		

*** WARNING ***

Case 17 is an outlier (Studentized Residual = 4.844119)

Durbin-Watson D Statistic 2.544672

First Order Autocorrelation -0.287745

Residuals have been saved.

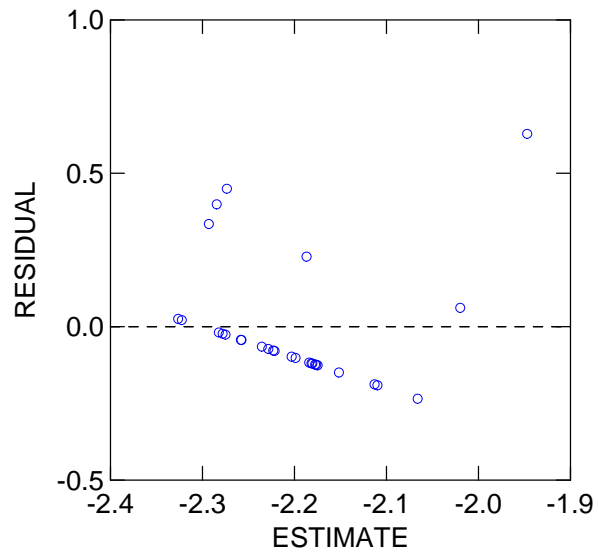
*** WARNING ***

Case 17 is an outlier (Studentized Residual = 4.844119)

Durbin-Watson D Statistic 2.544672

First Order Autocorrelation -0.287745

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_NH30203.SYD, created Tue Jul 11, 2006 at 13:28:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

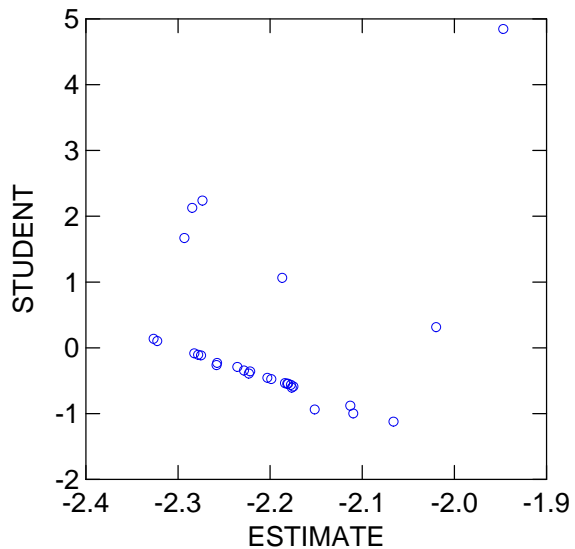
31 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.235034
Maximum	0.628163
Mean	0.000000
Standard Dev	0.207913

RES	
N of cases	29
Minimum	0.582058
Maximum	4.247793
Mean	1.152135
Standard Dev	0.809759

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Olsenregr_nh30203.SYD,
 created Tue Jul 11, 2006 at 13:28:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 31 Multiple R: 0.771437 Squared multiple R: 0.595116

Adjusted squared multiple R: 0.493894 Standard error of estimate: 0.146363

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.233270	1.076413	0.000000	.	-1.14572	0.26321
LFL_A	-0.756830	0.586264	-2.590317	0.004190	-1.29094	0.20902
LFL_ASQ	-0.113458	0.078276	-3.133257	0.003610	-1.44946	0.16015
SIN_YF	-0.045156	0.083991	-0.157162	0.197423	-0.53763	0.59578
COS_YF	0.125488	0.063428	0.407763	0.397149	1.97845	0.05947
SIN2_YF	0.031493	0.048727	0.105691	0.630877	0.64632	0.52420
COS2_YF	-0.005524	0.042222	-0.019695	0.744431	-0.13083	0.89700

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.755689	6	0.125948	5.879362	0.000694
Residual	0.514130	24	0.021422		

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -3.780482)
 Case 16 is an outlier (Studentized Residual = 3.354910)

Durbin-Watson D Statistic 2.308199
 First Order Autocorrelation -0.171608

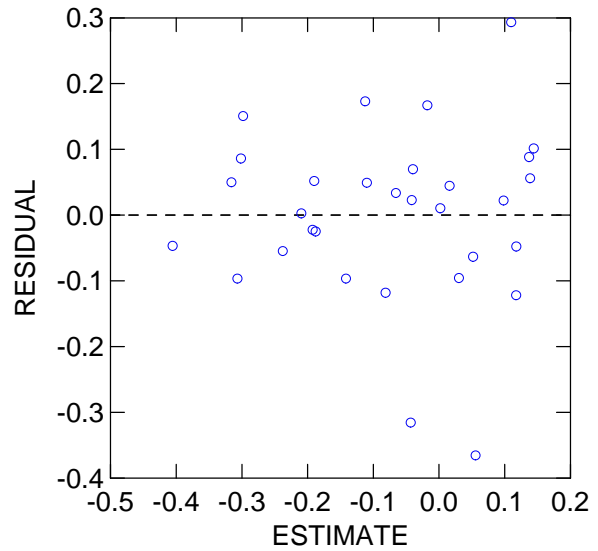
Residuals have been saved.

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -3.780482)
 Case 16 is an outlier (Studentized Residual = 3.354910)

Durbin-Watson D Statistic 2.308199
 First Order Autocorrelation -0.171608

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_TN0203.SYD,
 created Tue Jul 11, 2006 at 13:28:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

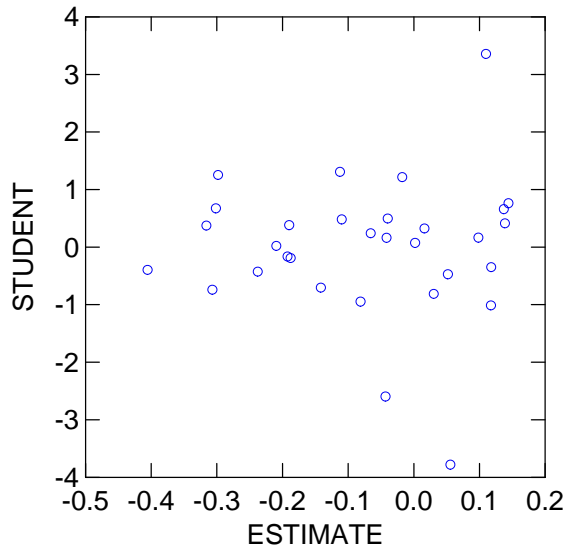
31 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	31
Minimum	-0.365578
Maximum	0.293106
Mean	0.000000
Standard Dev	0.130911

RES	
N of cases	31
Minimum	0.430945
Maximum	1.963839
Mean	1.042343
Standard Dev	0.298651

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Olsenregr_tn0203.SYD,
 created Tue Jul 11, 2006 at 13:28:48, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

2 case(s) deleted due to missing data.

Dep Var: LTOC N: 29 Multiple R: 0.928220 Squared multiple R: 0.861592

Adjusted squared multiple R: 0.823844 Standard error of estimate: 0.092291

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.603348	0.772371	0.000000	.	2.07588	0.04980
LFL_A	0.172820	0.410310	0.536074	0.003884	0.42119	0.67770
LFL_ASQ	-0.019668	0.053637	-0.498357	0.003406	-0.36669	0.71735
SIN_YF	-0.310455	0.053098	-1.008505	0.211457	-5.84682	0.00001
COS_YF	0.049667	0.040421	0.155955	0.390547	1.22876	0.23215
SIN2_YF	-0.092997	0.031174	-0.299032	0.626106	-2.98314	0.00686
COS2_YF	-0.008519	0.026755	-0.028163	0.804237	-0.31842	0.75317

Analysis of Variance

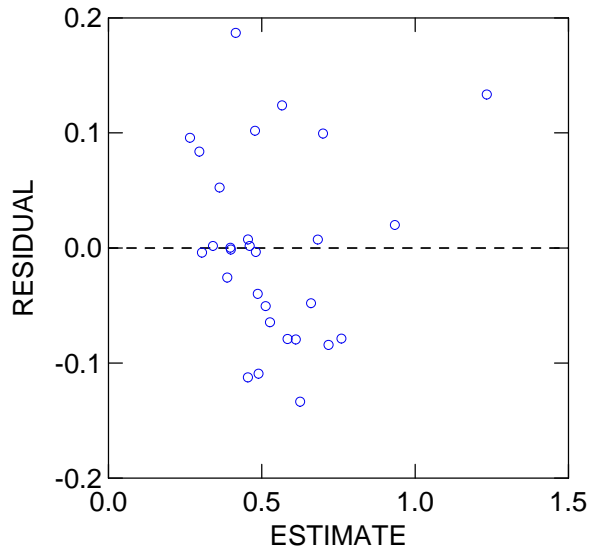
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.166482	6	0.194414	22.825066	0.000000
Residual	0.187386	22	0.008518		

Durbin-Watson D Statistic 1.617400
 First Order Autocorrelation 0.158043

Residuals have been saved.

Durbin-Watson D Statistic 1.617400
 First Order Autocorrelation 0.158043

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_TOC0203.SYD, created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

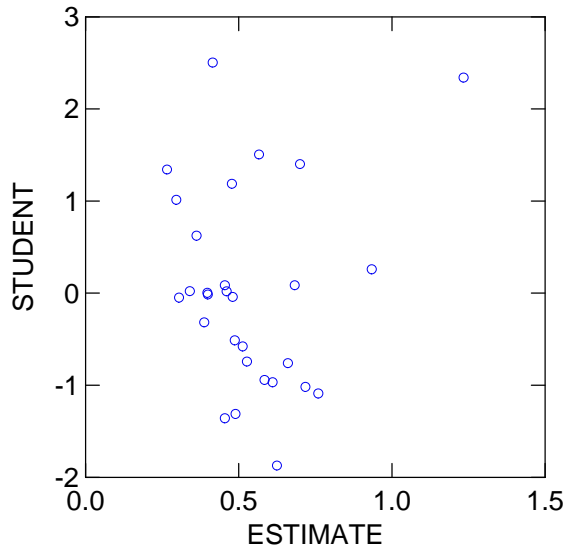
31 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.133665
Maximum	0.186815
Mean	0.000000
Standard Dev	0.081807

RES	
N of cases	29
Minimum	0.735081
Maximum	1.537499
Mean	1.017719
Standard Dev	0.199865

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Olsenregr_toc0203.SYD,
 created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

7 case(s) deleted due to missing data.

Dep Var: LCOND N: 24 Multiple R: 0.611471 Squared multiple R: 0.373896

Adjusted squared multiple R: 0.152919 Standard error of estimate: 0.221509

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-3.750613	2.545449	0.000000	.	-1.47346	0.15890
LFL_A	-2.916893	1.254717	-7.611930	0.003435	-2.32474	0.03273
LFL_ASQ	-0.371585	0.155014	-8.086955	0.003236	-2.39711	0.02829
SIN_YF	-0.233894	0.152488	-0.668012	0.194175	-1.53385	0.14347
COS_YF	-0.033062	0.106469	-0.098061	0.369341	-0.31054	0.75993
SIN2_YF	-0.002982	0.083273	-0.008856	0.602166	-0.03581	0.97185
COS2_YF	-0.046996	0.071554	-0.141431	0.794254	-0.65679	0.52011

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.498121	6	0.083020	1.692009	0.183533
Residual	0.834123	17	0.049066		

*** WARNING ***

Case 6 has large leverage (Leverage = 1.082578)
 Case 16 has large leverage (Leverage = 1.755176)
 Case 29 is an outlier (Studentized Residual = -10.423856)
 Case 31 has large leverage (Leverage = 1.015404)

Durbin-Watson D Statistic 2.662030
 First Order Autocorrelation -0.420134

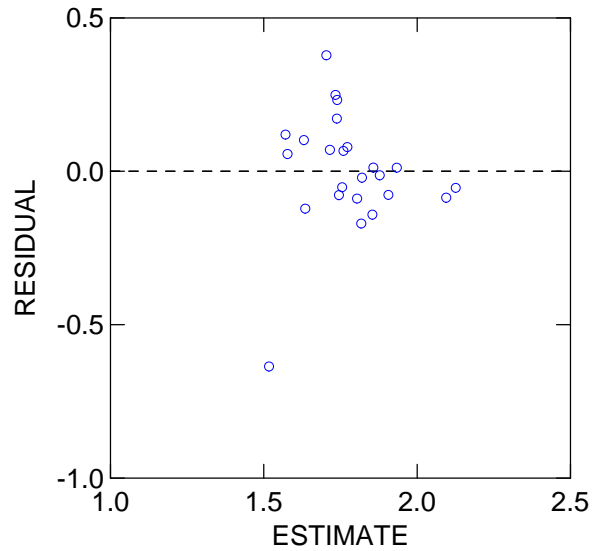
Residuals have been saved.

*** WARNING ***

Case 6 has large leverage (Leverage = 1.082578)
 Case 16 has large leverage (Leverage = 1.755176)
 Case 29 is an outlier (Studentized Residual = -10.423856)
 Case 31 has large leverage (Leverage = 1.015404)

Durbin-Watson D Statistic 2.662030
 First Order Autocorrelation -0.420134

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_COND0203.SYD, created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

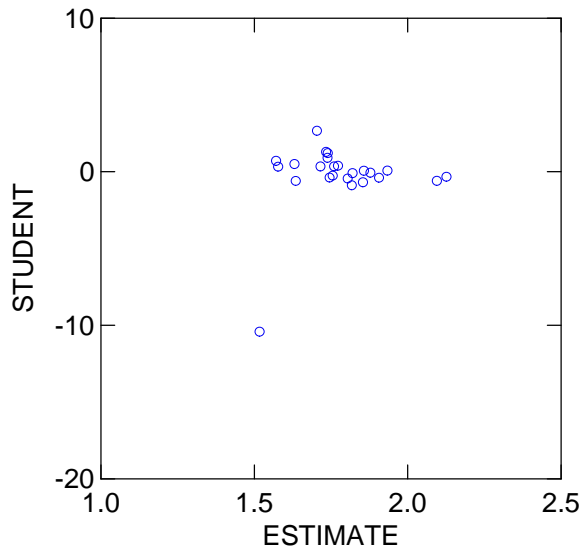
31 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.636585
Maximum	0.377493
Mean	0.000000
Standard Dev	0.190437

RES	
N of cases	24
Minimum	0.230895
Maximum	2.385028
Mean	1.084761
Standard Dev	0.434816

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Olsenregr_cond0203.SYD,
 created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 30 Multiple R: 0.955868 Squared multiple R: 0.913683

Adjusted squared multiple R: 0.891166 Standard error of estimate: 0.088830

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.435562	0.716468	0.000000	.	-0.60793	0.54919
LFL_A	-0.634784	0.383386	-1.628502	0.003879	-1.65573	0.11136
LFL_ASQ	-0.044379	0.050453	-0.925390	0.003391	-0.87962	0.38816
SIN_YF	-0.116647	0.051023	-0.315061	0.197604	-2.28618	0.03178
COS_YF	0.016522	0.038641	0.040371	0.420978	0.42758	0.67294
SIN2_YF	-0.041682	0.029679	-0.106007	0.658716	-1.40443	0.17355
COS2_YF	0.020312	0.027093	0.055410	0.687063	0.74972	0.46102

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.921079	6	0.320180	40.576798	0.000000
Residual	0.181486	23	0.007891		

*** WARNING ***

Case 13 has large leverage (Leverage = 0.549506)
 Case 23 is an outlier (Studentized Residual = -4.098356)
 Case 24 is an outlier (Studentized Residual = -2.866238)

Durbin-Watson D Statistic 1.426742
 First Order Autocorrelation 0.282702

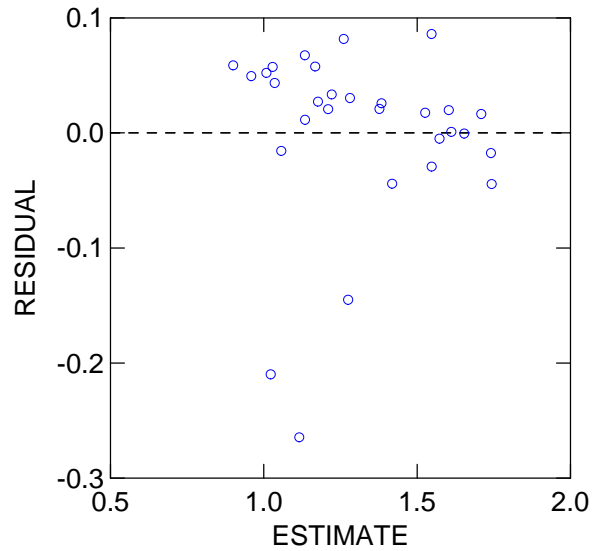
Residuals have been saved.

*** WARNING ***

Case 13 has large leverage (Leverage = 0.549506)
 Case 23 is an outlier (Studentized Residual = -4.098356)
 Case 24 is an outlier (Studentized Residual = -2.866238)

Durbin-Watson D Statistic 1.426742
 First Order Autocorrelation 0.282702

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\OlsenREGR_ALK0203.SYD, created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

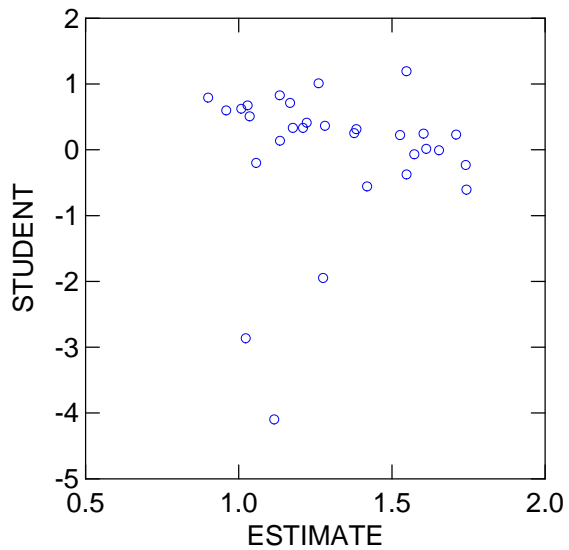
31 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	30
Minimum	-0.264607
Maximum	0.085871
Mean	0.000000
Standard Dev	0.079108

RES	
N of cases	30
Minimum	0.543742
Maximum	1.218628
Mean	1.014367
Standard Dev	0.156140

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Olsenregr_alk0203.SYD,
 created Tue Jul 11, 2006 at 13:28:50, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Silver Beach Creek

Nitrate/Nitrite

Dep Var: LNO N: 27 Multiple R: 0.920290 Squared multiple R: 0.846935

Adjusted squared multiple R: 0.801015 Standard error of estimate: 0.139219

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	2.471698	1.195232	0.000000	.	2.06796	0.05182
LFL_A	1.385664	0.544369	3.394640	0.004303	2.54545	0.01926
LFL_ASQ	0.156245	0.062030	3.380575	0.004249	2.51884	0.02040
SIN_YF	0.276824	0.079028	0.625390	0.240099	3.50286	0.00224
COS_YF	0.139655	0.072498	0.312995	0.289891	1.92633	0.06839
SIN2_YF	0.148092	0.047937	0.332898	0.659085	3.08929	0.00578
COS2_YF	0.139230	0.039718	0.326834	0.880397	3.50544	0.00223

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	2.144871	6	0.357479	18.443844	0.000000
Residual	0.387640	20	0.019382		

*** WARNING ***

Case 10 is an outlier (Studentized Residual = 3.710788)
 Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 2.520983
 First Order Autocorrelation -0.289802

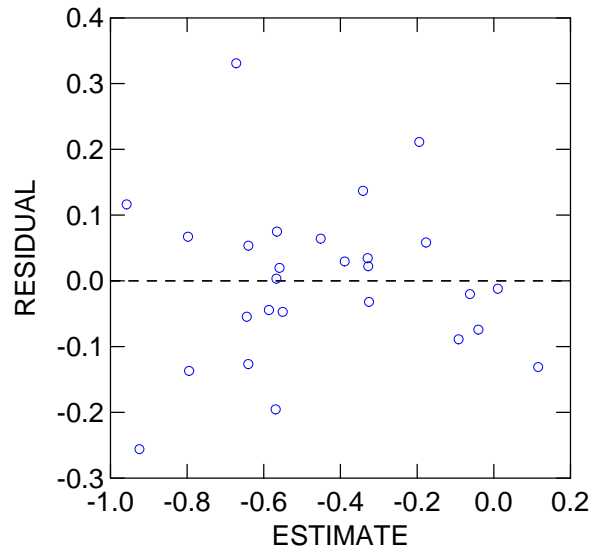
Residuals have been saved.

*** WARNING ***

Case 10 is an outlier (Studentized Residual = 3.710788)
 Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 2.520983
 First Order Autocorrelation -0.289802

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_NO30203.SYD, created Thu Jul 06, 2006 at 15:27:10, contains variables:

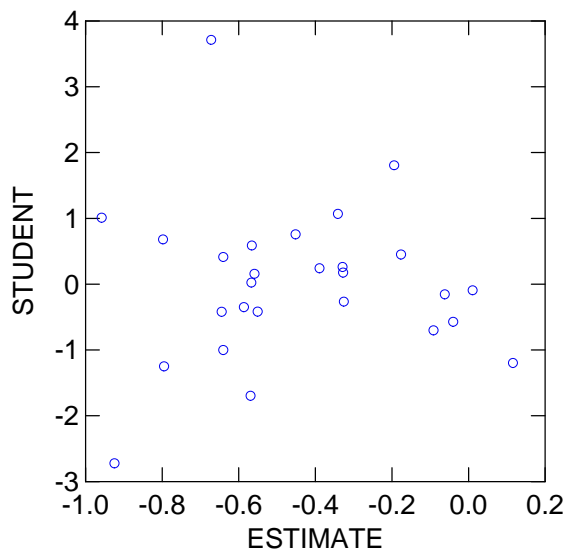
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

27 cases and 14 variables processed and saved.

RES	
N of cases	27
Minimum	0.554473
Maximum	2.141761
Mean	1.040452
Standard Dev	0.319927

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_NO30203.SYD,
created Thu Jul 06, 2006 at 15:27:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 27 Multiple R: 0.513116 Squared multiple R: 0.263289

Adjusted squared multiple R: 0.042275 Standard error of estimate: 0.234612

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.334641	2.014208	0.000000	.	-0.66261	0.51514
LFL_A	0.262872	0.917372	0.838376	0.004303	0.28655	0.77740
LFL_ASQ	0.017628	0.104534	0.496530	0.004249	0.16863	0.86778
SIN_YF	0.079800	0.133178	0.234697	0.240099	0.59920	0.55577
COS_YF	-0.058143	0.122173	-0.169644	0.289891	-0.47591	0.63930
SIN2_YF	0.057265	0.080784	0.167581	0.659085	0.70886	0.48659
COS2_YF	0.068255	0.066933	0.208588	0.880397	1.01975	0.32002

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.393429	6	0.065572	1.191278	0.350647
Residual	1.100860	20	0.055043		

*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 1.241842

First Order Autocorrelation 0.263807

Residuals have been saved.

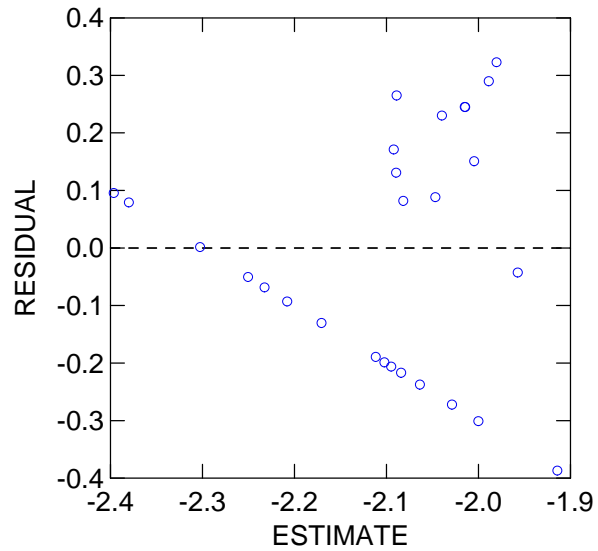
*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 1.241842

First Order Autocorrelation 0.263807

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_NH30203.SYD, created Thu Jul 06, 2006 at 15:27:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

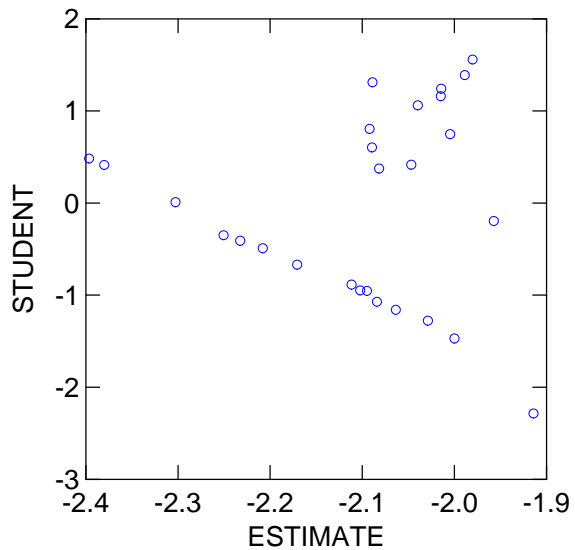
27 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	27
Minimum	-0.386950
Maximum	0.322593
Mean	0.000000
Standard Dev	0.205769

RES	
N of cases	27
Minimum	0.410251
Maximum	2.101807
Mean	1.109696
Standard Dev	0.501922

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBregr_nh30203.SYD,
 created Thu Jul 06, 2006 at 15:27:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 27 Multiple R: 0.911770 Squared multiple R: 0.831325

Adjusted squared multiple R: 0.780722 Standard error of estimate: 0.086478

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.768704	0.742437	0.000000	.	2.38229	0.02724
LFL_A	0.864543	0.338143	3.579332	0.004303	2.55673	0.01880
LFL_ASQ	0.090121	0.038531	3.295260	0.004249	2.33890	0.02983
SIN_YF	0.112529	0.049090	0.429626	0.240099	2.29232	0.03287
COS_YF	0.040476	0.045033	0.153304	0.289891	0.89880	0.37946
SIN2_YF	0.093152	0.029777	0.353877	0.659085	3.12833	0.00529
COS2_YF	0.081865	0.024672	0.324767	0.880397	3.31819	0.00343

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.737161	6	0.122860	16.428499	0.000001
Residual	0.149570	20	0.007478		

*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 2.378223

First Order Autocorrelation -0.215271

Residuals have been saved.

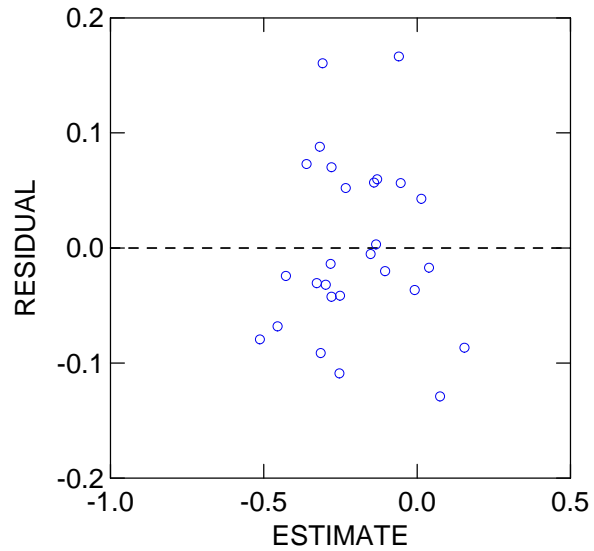
*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 2.378223

First Order Autocorrelation -0.215271

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_TN0203.SYD, created Thu Jul 06, 2006 at 15:27:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

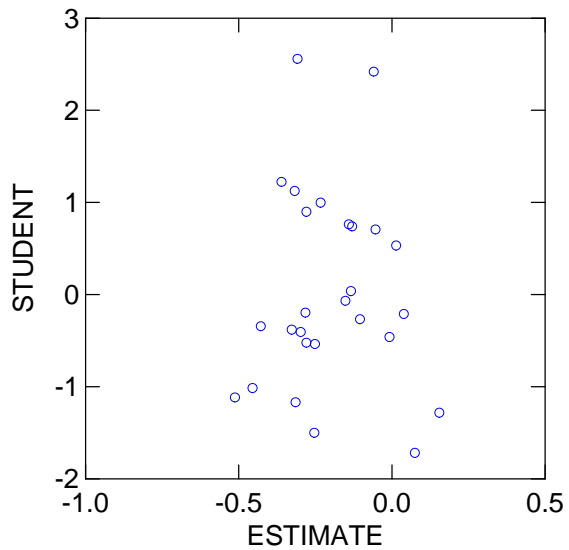
27 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	27
Minimum	-0.129068
Maximum	0.166320
Mean	0.000000
Standard Dev	0.075846

RES	
N of cases	27
Minimum	0.742903
Maximum	1.466627
Mean	1.015158
Standard Dev	0.184700

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBregr_tn0203.SYD,
 created Thu Jul 06, 2006 at 15:27:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

Dep Var: LTOC N: 27 Multiple R: 0.786858 Squared multiple R: 0.619146

Adjusted squared multiple R: 0.504890 Standard error of estimate: 0.078419

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	2.430883	0.673244	0.000000	.	3.61070	0.00174
LFL_A	0.551154	0.306629	3.781193	0.004303	1.79746	0.08738
LFL_ASQ	0.040890	0.034940	2.477550	0.004249	1.17029	0.25564
SIN_YF	-0.174010	0.044515	-1.100882	0.240099	-3.90906	0.00087
COS_YF	-0.038219	0.040836	-0.239871	0.289891	-0.93590	0.36049
SIN2_YF	-0.045760	0.027002	-0.288061	0.659085	-1.69469	0.10565
COS2_YF	0.030048	0.022372	0.197527	0.880397	1.34308	0.19429

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.199942	6	0.033324	5.418928	0.001815
Residual	0.122990	20	0.006149		

*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 1.127532

First Order Autocorrelation 0.298718

Residuals have been saved.

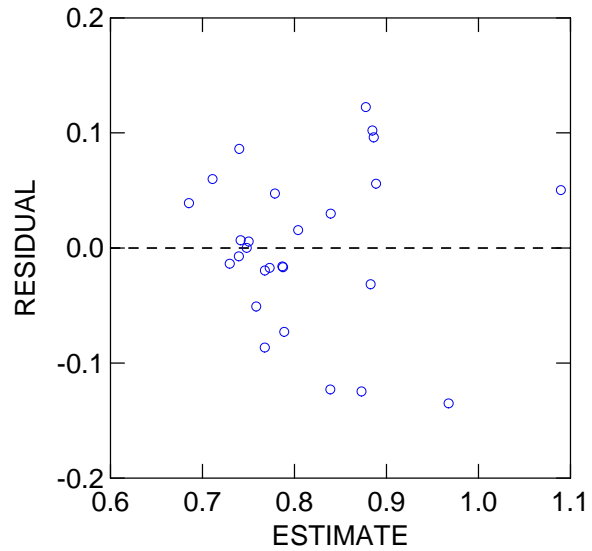
*** WARNING ***

Case 25 has large leverage (Leverage = 0.636413)

Durbin-Watson D Statistic 1.127532

First Order Autocorrelation 0.298718

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_TOC0203.SYD, created Thu Jul 06, 2006 at 15:27:11, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

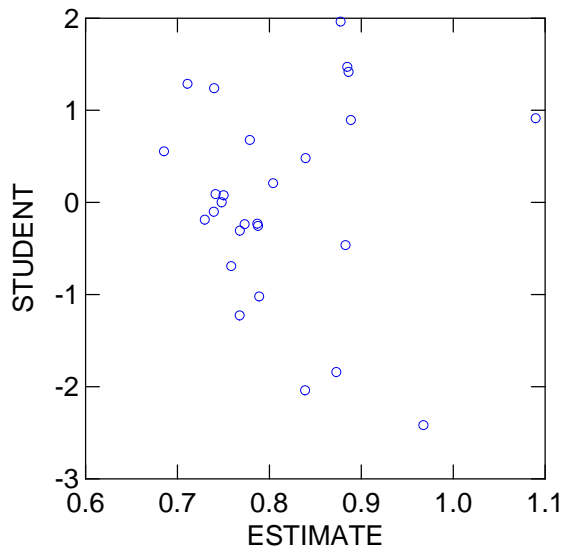
27 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	27
Minimum	-0.135124
Maximum	0.122370
Mean	0.000000
Standard Dev	0.068778

RES	
N of cases	27
Minimum	0.732615
Maximum	1.325472
Mean	1.011957
Standard Dev	0.157095

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBregr_toc0203.SYD,
 created Thu Jul 06, 2006 at 15:27:11, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

3 case(s) deleted due to missing data.

Dep Var: LCOND N: 24 Multiple R: 0.957405 Squared multiple R: 0.916624

Adjusted squared multiple R: 0.887197 Standard error of estimate: 0.054453

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.037031	0.609117	0.000000	.	-0.06079	0.95223
LFL_A	-0.898773	0.267030	-4.055825	0.003378	-3.36582	0.00367
LFL_ASQ	-0.083121	0.029087	-3.368801	0.003529	-2.85765	0.01090
SIN_YF	-0.057117	0.031801	-0.242146	0.269833	-1.79609	0.09027
COS_YF	-0.012647	0.031338	-0.055673	0.257691	-0.40355	0.69157
SIN2_YF	-0.000961	0.019445	-0.004235	0.667571	-0.04941	0.96117
COS2_YF	0.006793	0.017511	0.030349	0.801340	0.38794	0.70288

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.554163	6	0.092361	31.149193	0.000000
Residual	0.050407	17	0.002965		

*** WARNING ***

Case 25 has large leverage (Leverage = 0.677599)
 Case 27 has large leverage (Leverage = 0.740329)

Durbin-Watson D Statistic 1.530559
 First Order Autocorrelation 0.222901

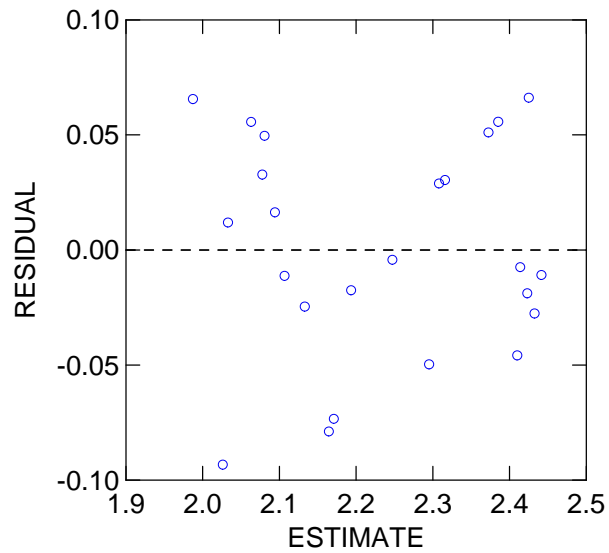
Residuals have been saved.

*** WARNING ***

Case 25 has large leverage (Leverage = 0.677599)
 Case 27 has large leverage (Leverage = 0.740329)

Durbin-Watson D Statistic 1.530559
 First Order Autocorrelation 0.222901

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_COND0203.SYD, created Thu Jul 06, 2006 at 15:27:12, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

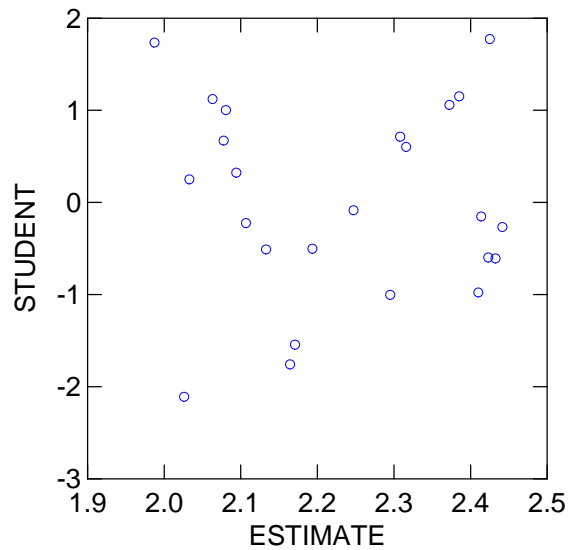
27 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	24
Minimum	-0.093302
Maximum	0.066152
Mean	0.000000
Standard Dev	0.046814

RES	
N of cases	24
Minimum	0.806674
Maximum	1.164534
Mean	1.005519
Standard Dev	0.106633

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBregr_cond0203.SYD,
 created Thu Jul 06, 2006 at 15:27:12, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

1 case(s) deleted due to missing data.

Dep Var: LALK N: 26 Multiple R: 0.991655 Squared multiple R: 0.983380

Adjusted squared multiple R: 0.978131 Standard error of estimate: 0.030446

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.215622	0.299333	0.000000	.	-0.72034	0.48008
LFL_A	-0.828424	0.133858	-3.005116	0.003710	-6.18883	0.00001
LFL_ASQ	-0.075869	0.014934	-2.452723	0.003753	-5.08042	0.00007
SIN_YF	-0.107781	0.017546	-0.375488	0.234113	-6.14277	0.00001
COS_YF	-0.057622	0.015955	-0.192585	0.307628	-3.61153	0.00186
SIN2_YF	-0.024001	0.010484	-0.081478	0.690573	-2.28929	0.03368
COS2_YF	-0.005718	0.009223	-0.020457	0.803356	-0.61995	0.54266

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	1.042055	6	0.173676	187.362191	0.000000
Residual	0.017612	19	0.000927		

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.842948)
 Case 25 has large leverage (Leverage = 0.663470)

Durbin-Watson D Statistic 2.558799
 First Order Autocorrelation -0.309780

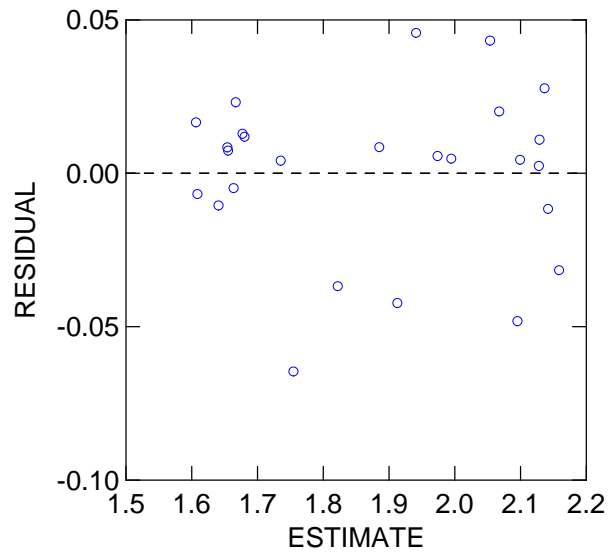
Residuals have been saved.

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.842948)
 Case 25 has large leverage (Leverage = 0.663470)

Durbin-Watson D Statistic 2.558799
 First Order Autocorrelation -0.309780

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBREGR_ALK0203.SYD, created Thu Jul 06, 2006 at 15:27:12, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

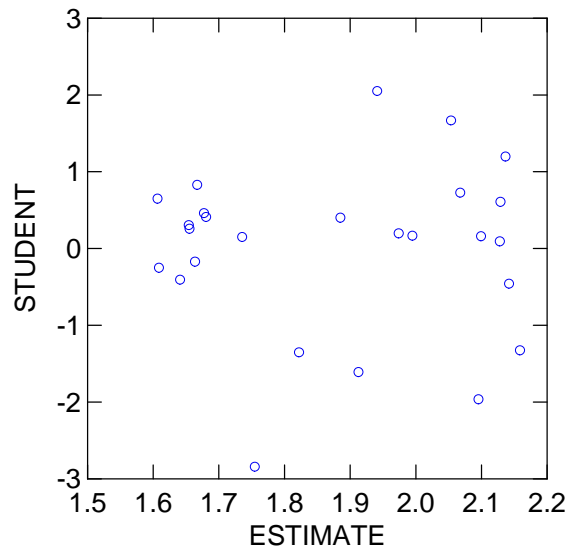
27 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	26
Minimum	-0.064614
Maximum	0.045700
Mean	0.000000
Standard Dev	0.026542

RES	
N of cases	26
Minimum	0.861759
Maximum	1.110964
Mean	1.001773
Standard Dev	0.060026

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SilverBregr_alk0203.SYD,
 created Thu Jul 06, 2006 at 15:27:12, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Smith Creek

Nitrate/Nitrite

Dep Var: LNO N: 29 Multiple R: 0.879557 Squared multiple R: 0.773620

Adjusted squared multiple R: 0.711881 Standard error of estimate: 0.111881

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.455092	0.909728	0.000000	.	-0.50025	0.62187
LFL_A	-0.398026	0.464763	-1.348982	0.004147	-0.85641	0.40101
LFL_ASQ	-0.069399	0.058646	-1.960104	0.003750	-1.18335	0.24930
SIN_YF	-0.041977	0.062822	-0.143852	0.222016	-0.66819	0.51096
COS_YF	0.145993	0.047580	0.483548	0.414331	3.06836	0.00563
SIN2_YF	-0.017398	0.036280	-0.059010	0.679518	-0.47954	0.63629
COS2_YF	-0.005054	0.033994	-0.017628	0.732023	-0.14868	0.88316

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.941085	6	0.156848	12.530322	0.000004
Residual	0.275384	22	0.012517		

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.955208)

Durbin-Watson D Statistic 2.648300

First Order Autocorrelation -0.374884

Residuals have been saved.

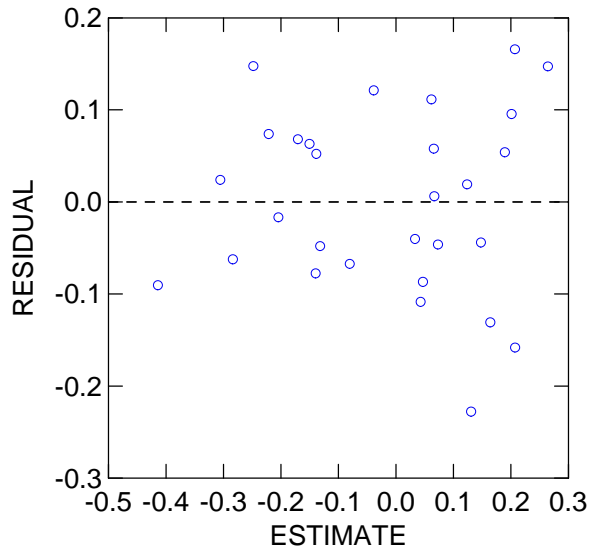
*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.955208)

Durbin-Watson D Statistic 2.648300

First Order Autocorrelation -0.374884

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_NO30203.SYD, created Thu Jul 06, 2006 at 16:58:06, contains variables:

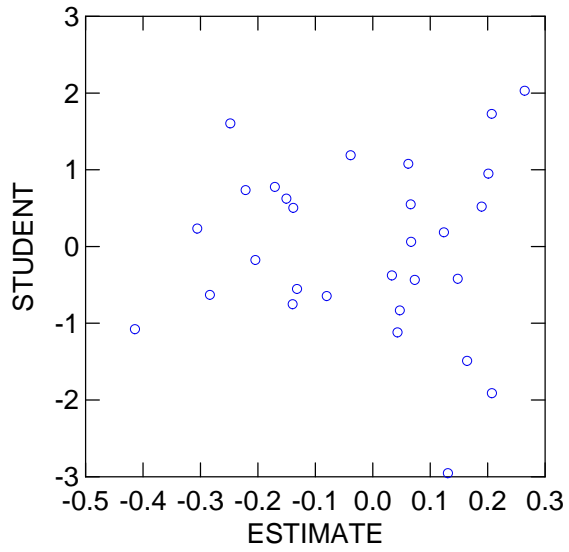
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

29 cases and 14 variables processed and saved.

RES	
N of cases	29
Minimum	0.591875
Maximum	1.464496
Mean	1.025022
Standard Dev	0.229127

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_NO30203.SYD,
created Thu Jul 06, 2006 at 16:58:06, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Ammonia

Dep Var: LNH3 N: 29 Multiple R: 0.439558 Squared multiple R: 0.193211

Adjusted squared multiple R: 0.000000 Standard error of estimate: 0.177253

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-3.114191	1.441280	0.000000	.	-2.16071	0.04187
LFL_A	-0.608466	0.736324	-2.457285	0.004147	-0.82636	0.41747
LFL_ASQ	-0.092481	0.092913	-3.112445	0.003750	-0.99535	0.33039
SIN_YF	-0.118414	0.099529	-0.483538	0.222016	-1.18975	0.24683
COS_YF	-0.126200	0.075381	-0.498073	0.414331	-1.67416	0.10826
SIN2_YF	0.102117	0.057478	0.412726	0.679518	1.77662	0.08946
COS2_YF	0.006658	0.053857	0.027670	0.732023	0.12363	0.90273

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.165533	6	0.027589	0.878099	0.526871
Residual	0.691213	22	0.031419		

*** WARNING ***

Case 1 is an outlier (Studentized Residual = 3.177017)
 Case 20 is an outlier (Studentized Residual = 4.174740)

Durbin-Watson D Statistic 1.900918
 First Order Autocorrelation -0.092264

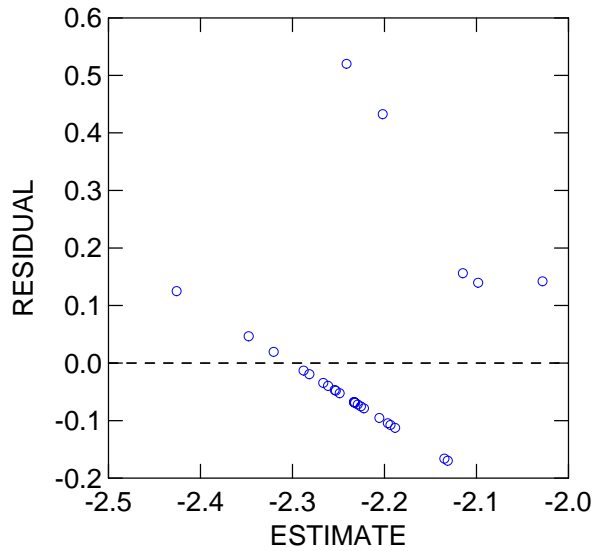
Residuals have been saved.

*** WARNING ***

Case 1 is an outlier (Studentized Residual = 3.177017)
 Case 20 is an outlier (Studentized Residual = 4.174740)

Durbin-Watson D Statistic 1.900918
 First Order Autocorrelation -0.092264

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_NH30203.SYD, created Thu Jul 06, 2006 at 16:58:07, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

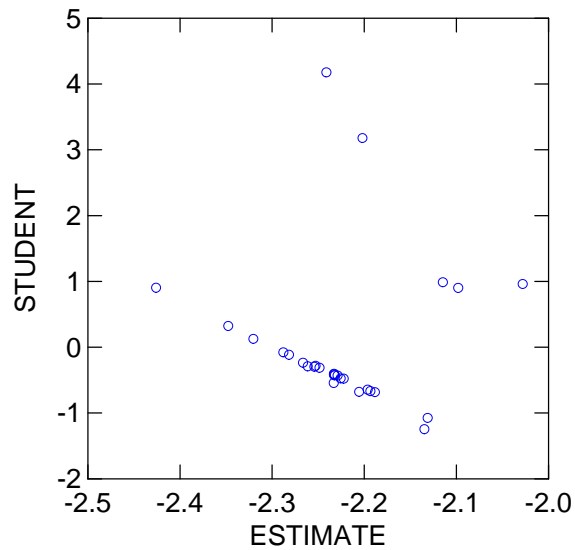
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.169898
Maximum	0.519825
Mean	0.000000
Standard Dev	0.157118

RES	
N of cases	29
Minimum	0.676242
Maximum	3.309980
Mean	1.084007
Standard Dev	0.575451

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Smithregr_nh30203.SYD,
 created Thu Jul 06, 2006 at 16:58:07, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Nitrogen

Dep Var: LTN N: 29 Multiple R: 0.896990 Squared multiple R: 0.804592

Adjusted squared multiple R: 0.751298 Standard error of estimate: 0.091433

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.366491	0.743460	0.000000	.	-0.49295	0.62693
LFL_A	-0.386544	0.379820	-1.489362	0.004147	-1.01770	0.31988
LFL_ASQ	-0.069327	0.047928	-2.226038	0.003750	-1.44649	0.16214
SIN_YF	-0.067192	0.051340	-0.261777	0.222016	-1.30877	0.20412
COS_YF	0.113777	0.038884	0.428419	0.414331	2.92605	0.00782
SIN2_YF	-0.022770	0.029649	-0.087804	0.679518	-0.76798	0.45066
COS2_YF	-0.013094	0.027781	-0.051917	0.732023	-0.47132	0.64205

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.757292	6	0.126215	15.097449	0.000001
Residual	0.183921	22	0.008360		

*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.838632)

Durbin-Watson D Statistic 2.675212

First Order Autocorrelation -0.409994

Residuals have been saved.

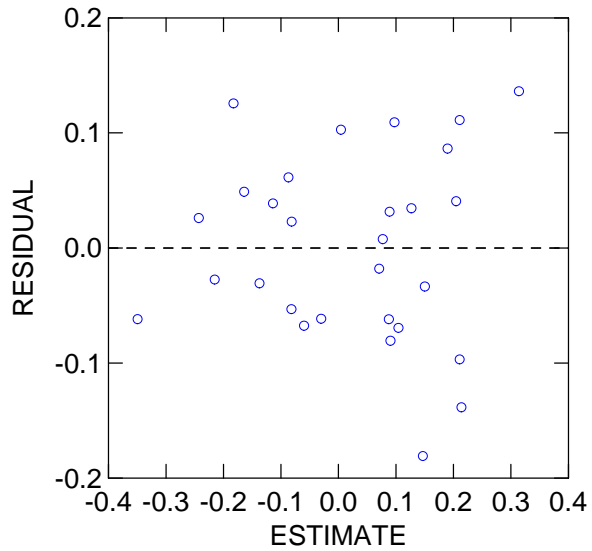
*** WARNING ***

Case 15 is an outlier (Studentized Residual = -2.838632)

Durbin-Watson D Statistic 2.675212

First Order Autocorrelation -0.409994

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_TN0203.SYD, created Thu Jul 06, 2006 at 16:58:07, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

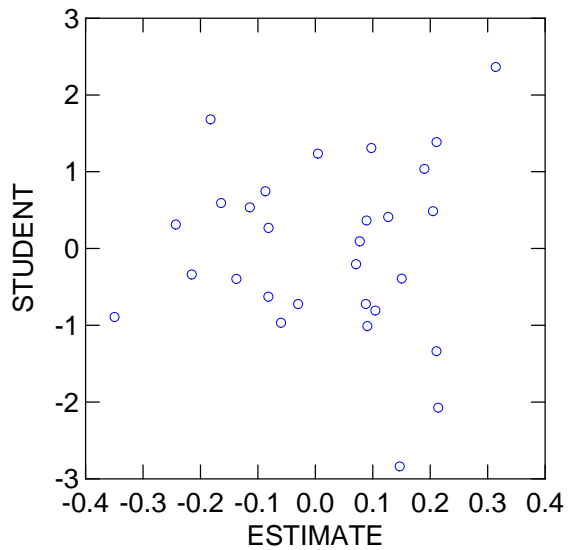
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	29
Minimum	-0.180864
Maximum	0.136166
Mean	0.000000
Standard Dev	0.081047

RES	
N of cases	29
Minimum	0.659380
Maximum	1.368253
Mean	1.016772
Standard Dev	0.187523

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Smithregr_tn0203.SYD,
 created Thu Jul 06, 2006 at 16:58:07, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTN	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Total Organic Carbon

1 case(s) deleted due to missing data.

Dep Var: LTOC N: 28 Multiple R: 0.912995 Squared multiple R: 0.833559

Adjusted squared multiple R: 0.786004 Standard error of estimate: 0.095097

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.337075	0.773263	0.000000	.	1.72913	0.09846
LFL_A	0.098662	0.395039	0.344796	0.004159	0.24975	0.80520
LFL_ASQ	-0.023646	0.049851	-0.689148	0.003755	-0.47433	0.64016
SIN_YF	-0.289975	0.053728	-1.023062	0.220576	-5.39710	0.00002
COS_YF	0.045894	0.040574	0.152485	0.436123	1.13113	0.27075
SIN2_YF	-0.098809	0.031492	-0.335625	0.692681	-3.13762	0.00497
COS2_YF	-0.024610	0.029399	-0.087579	0.724085	-0.83709	0.41197

Analysis of Variance

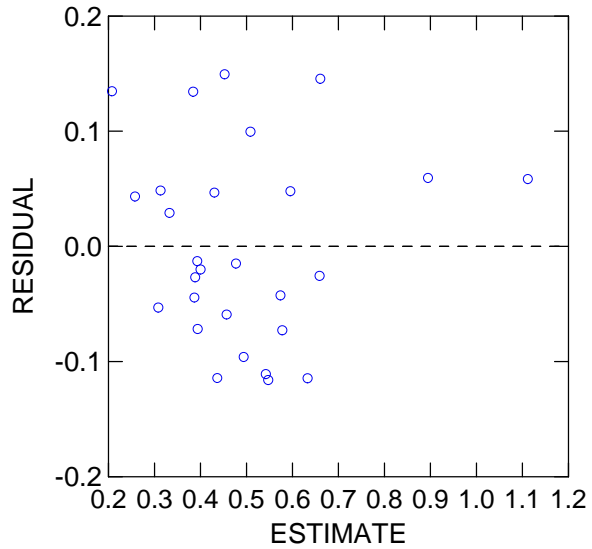
Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.951101	6	0.158517	17.528477	0.000000
Residual	0.189911	21	0.009043		

Durbin-Watson D Statistic 1.937224
 First Order Autocorrelation -0.002744

Residuals have been saved.

Durbin-Watson D Statistic 1.937224
 First Order Autocorrelation -0.002744

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_TOC0203.SYD, created Thu Jul 06, 2006 at 16:58:09, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

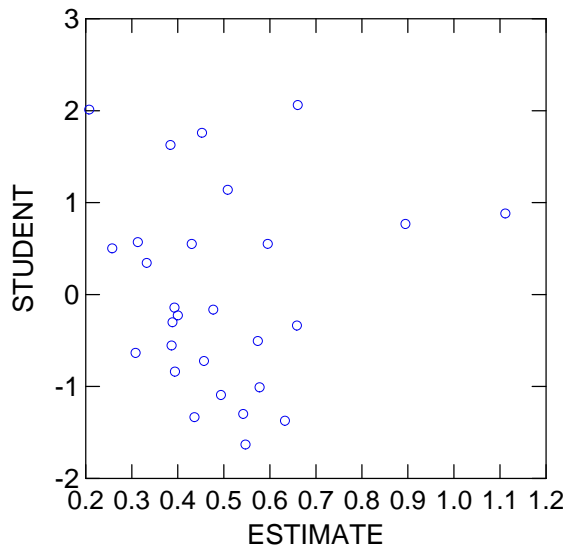
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	28
Minimum	-0.116082
Maximum	0.149390
Mean	0.000000
Standard Dev	0.083867

RES	
N of cases	28
Minimum	0.765452
Maximum	1.410554
Mean	1.018452
Standard Dev	0.202139

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Smithregr_toc0203.SYD,
 created Thu Jul 06, 2006 at 16:58:09, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTOC	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Conductivity

6 case(s) deleted due to missing data.

Dep Var: LCOND N: 23 Multiple R: 0.823890 Squared multiple R: 0.678794

Adjusted squared multiple R: 0.558342 Standard error of estimate: 0.074052

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	1.298908	0.925665	0.000000	.	1.40322	0.17966
LFL_A	-0.154275	0.467537	-0.830329	0.003170	-0.32997	0.74570
LFL_ASQ	-0.008069	0.058882	-0.358549	0.002933	-0.13704	0.89271
SIN_YF	-0.074238	0.054593	-0.445483	0.187055	-1.35983	0.19274
COS_YF	0.021753	0.036624	0.140481	0.358854	0.59394	0.56085
SIN2_YF	-0.011087	0.027612	-0.070058	0.659430	-0.40153	0.69335
COS2_YF	-0.003498	0.025591	-0.023225	0.695540	-0.13670	0.89297

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.185415	6	0.030903	5.635391	0.002608
Residual	0.087738	16	0.005484		

*** WARNING ***

Case 12 has large leverage (Leverage = 0.981273)
 Case 14 has large leverage (Leverage = 1.451279)
 Case 27 has large leverage (Leverage = 1.249660)
 Case 28 has large leverage (Leverage = 0.699136)
 Case 29 has large leverage (Leverage = 0.969126)

Durbin-Watson D Statistic 0.929239
 First Order Autocorrelation 0.486157

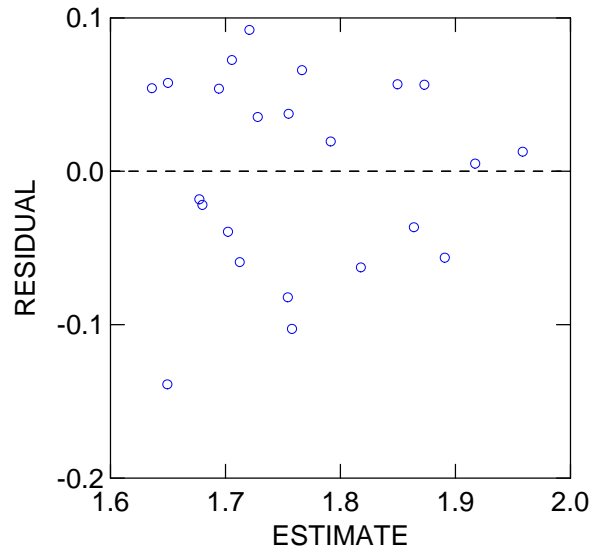
Residuals have been saved.

*** WARNING ***

Case 12 has large leverage (Leverage = 0.981273)
 Case 14 has large leverage (Leverage = 1.451279)
 Case 27 has large leverage (Leverage = 1.249660)
 Case 28 has large leverage (Leverage = 0.699136)
 Case 29 has large leverage (Leverage = 0.969126)

Durbin-Watson D Statistic 0.929239
 First Order Autocorrelation 0.486157

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_COND0203.SYD, created Thu Jul 06, 2006 at 16:58:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

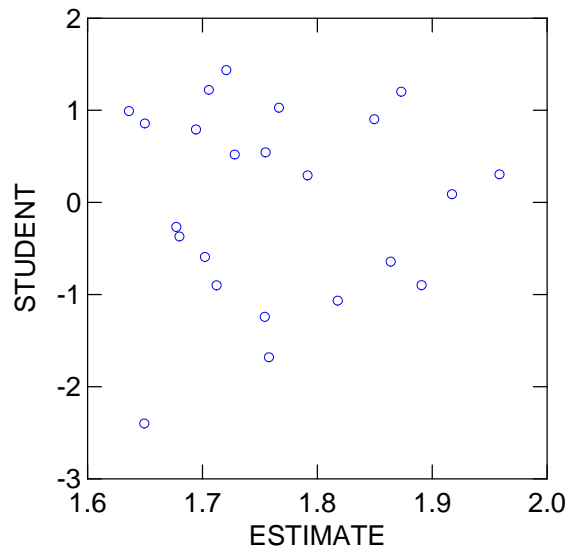
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	23
Minimum	-0.138929
Maximum	0.092069
Mean	0.000000
Standard Dev	0.063151

RES	
N of cases	23
Minimum	0.726225
Maximum	1.236143
Mean	1.009913
Standard Dev	0.141704

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Smithregr_cond0203.SYD,
 created Thu Jul 06, 2006 at 16:58:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LCOND	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Alkalinity

2 case(s) deleted due to missing data.

Dep Var: LALK N: 27 Multiple R: 0.973587 Squared multiple R: 0.947871

Adjusted squared multiple R: 0.932233 Standard error of estimate: 0.047100

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.639923	0.511266	0.000000	.	-1.25165	0.22514
LFL_A	-0.770368	0.261105	-2.738689	0.003025	-2.95041	0.00791
LFL_ASQ	-0.070023	0.032825	-2.062658	0.002788	-2.13326	0.04548
SIN_YF	-0.084405	0.027566	-0.332854	0.220558	-3.06190	0.00615
COS_YF	-0.013161	0.020063	-0.049709	0.453940	-0.65601	0.51930
SIN2_YF	-0.014969	0.015278	-0.056973	0.770863	-0.97979	0.33889
COS2_YF	0.005493	0.015747	0.022572	0.622552	0.34884	0.73086

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.806766	6	0.134461	60.610956	0.000000
Residual	0.044369	20	0.002218		

*** WARNING ***

Case 14 has large leverage (Leverage = 0.582826)
 Case 27 has large leverage (Leverage = 0.867158)
 Case 29 has large leverage (Leverage = 0.727890)

Durbin-Watson D Statistic 2.314815
 First Order Autocorrelation -0.161058

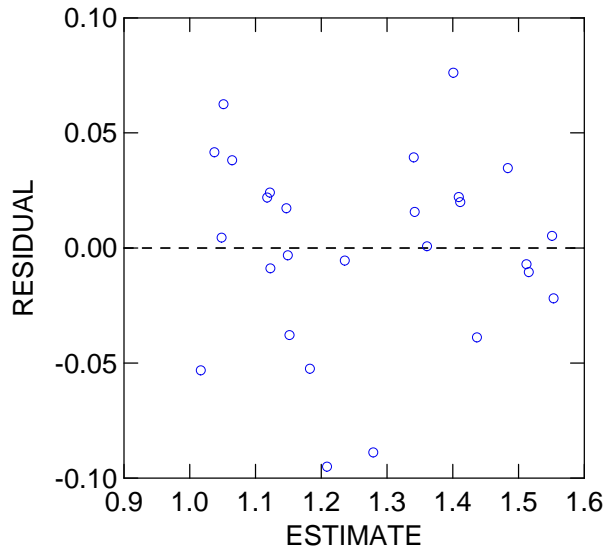
Residuals have been saved.

*** WARNING ***

Case 14 has large leverage (Leverage = 0.582826)
 Case 27 has large leverage (Leverage = 0.867158)
 Case 29 has large leverage (Leverage = 0.727890)

Durbin-Watson D Statistic 2.314815
 First Order Autocorrelation -0.161058

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\SmithREGR_ALK0203.SYD, created Thu Jul 06, 2006 at 16:58:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					

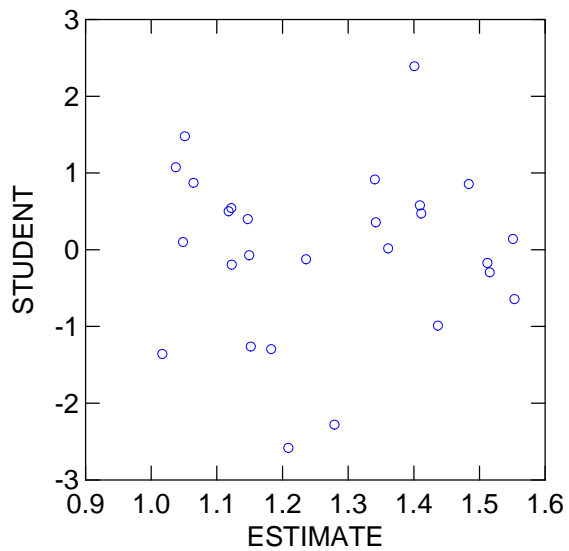
29 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	27
Minimum	-0.095059
Maximum	0.076105
Mean	0.000000
Standard Dev	0.041310

RES	
N of cases	27
Minimum	0.803416
Maximum	1.191531
Mean	1.004289
Standard Dev	0.093202

SYSTAT Rectangular file D:\My Documents\Lake What 05\Trib Conc\systat\Smithregr_alk0203.SYD,
 created Thu Jul 06, 2006 at 16:58:10, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPRD
LALK	LFL_A	LFL_ASQ	SIN_YF	COS_YF	SIN2_YF
COS2_YF					



Middle Fork Nooksack River

Nitrate/Nitrite

4 case(s) deleted due to missing data.

Dep Var: LNO N: 75 Multiple R: 0.766090 Squared multiple R: 0.586894

Adjusted squared multiple R: 0.550443 Standard error of estimate: 0.237135

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.088834	0.287775	0.000000	.	-3.78363	0.00033
LFL_A	-0.089939	0.511843	-0.071801	0.036384	-0.17572	0.86104
LFL_ASQ	-0.077969	0.227990	-0.140868	0.035805	-0.34198	0.73342
SIN_YF	0.009363	0.038382	0.019737	0.928123	0.24395	0.80801
COS_YF	0.383622	0.042570	0.733732	0.916395	9.01160	0.00000
SIN2_YF	-0.069468	0.041086	-0.143083	0.848309	-1.69079	0.09546
COS2_YF	-0.071958	0.042593	-0.139934	0.885491	-1.68943	0.09572

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	5.432498	6	0.905416	16.101088	0.000000
Residual	3.823860	68	0.056233		

*** WARNING ***

Case 61 is an outlier (Studentized Residual = -3.481966)
 Case 62 is an outlier (Studentized Residual = -3.771376)
 Case 72 has large leverage (Leverage = 0.296596)
 Case 77 has large leverage (Leverage = 0.578629)

Durbin-Watson D Statistic 1.405062
 First Order Autocorrelation 0.282851

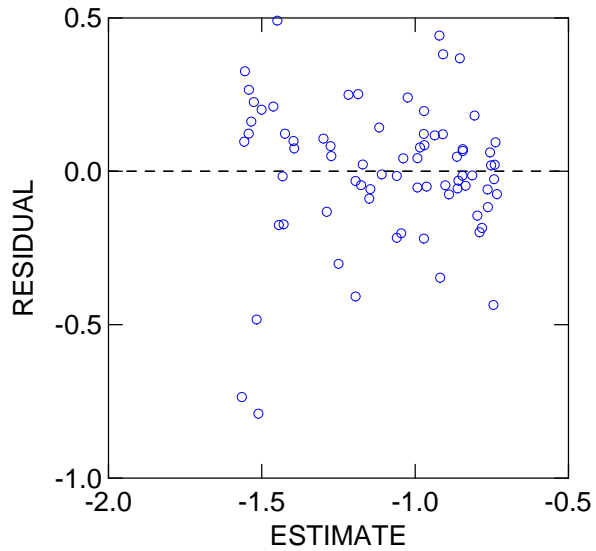
Residuals have been saved.

*** WARNING ***

Case 61 is an outlier (Studentized Residual = -3.481966)
 Case 62 is an outlier (Studentized Residual = -3.771376)
 Case 72 has large leverage (Leverage = 0.296596)
 Case 77 has large leverage (Leverage = 0.578629)

Durbin-Watson D Statistic 1.405062
 First Order Autocorrelation 0.282851

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\REGR_NO3.SYD, created Fri Jan 06, 2006 at 15:22:58, contains variables:

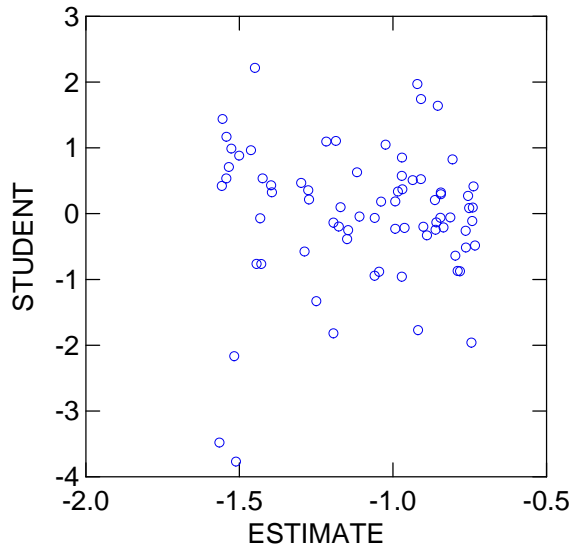
ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					

79 cases and 14 variables processed and saved.

RES	
N of cases	75
Minimum	0.162156
Maximum	3.094351
Mean	1.126114
Standard Dev	0.538505

SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\REGR_NO3.SYD,
created Fri Jan 06, 2006 at 15:22:58, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNO	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					



Ammonia

3 case(s) deleted due to missing data.

Dep Var: LNH3 N: 76 Multiple R: 0.203629 Squared multiple R: 0.041465

Adjusted squared multiple R: 0.000000 Standard error of estimate: 0.278971

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-2.362155	0.337197	0.000000	.	-7.00526	0.00000
LFL_A	-0.124784	0.602674	-0.131015	0.034695	-0.20705	0.83658
LFL_ASQ	-0.060582	0.268456	-0.143910	0.034160	-0.22567	0.82213
SIN_YF	0.048540	0.045345	0.132093	0.912307	1.07046	0.28814
COS_YF	0.036740	0.049320	0.091142	0.928026	0.74493	0.45884
SIN2_YF	-0.029247	0.048957	-0.076419	0.848985	-0.59741	0.55219
COS2_YF	0.042423	0.048930	0.109001	0.878882	0.86700	0.38895

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	0.232296	6	0.038716	0.497474	0.808132
Residual	5.369932	69	0.077825		

*** WARNING ***

Case 37 is an outlier (Studentized Residual = -4.345128)
 Case 71 is an outlier (Studentized Residual = -8.317132)
 Case 72 has large leverage (Leverage = 0.294042)
 Case 77 has large leverage (Leverage = 0.568746)

Durbin-Watson D Statistic 1.954175
 First Order Autocorrelation 0.013548

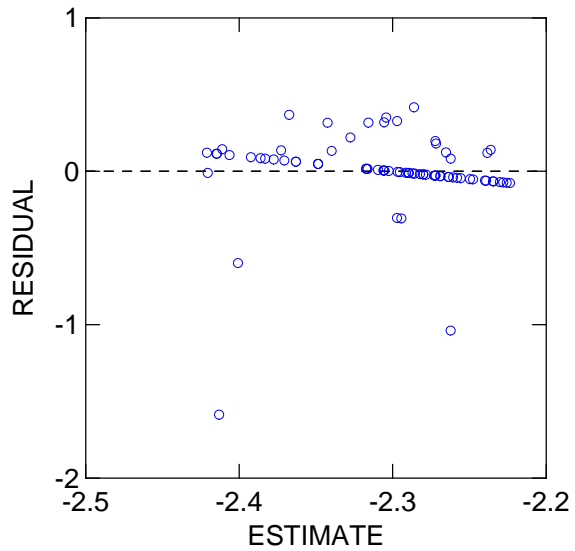
Residuals have been saved.

*** WARNING ***

Case 37 is an outlier (Studentized Residual = -4.345128)
 Case 71 is an outlier (Studentized Residual = -8.317132)
 Case 72 has large leverage (Leverage = 0.294042)
 Case 77 has large leverage (Leverage = 0.568746)

Durbin-Watson D Statistic 1.954175
 First Order Autocorrelation 0.013548

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\REGR_NH3.SYD, created Fri Jan 06, 2006 at 15:22:58, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					

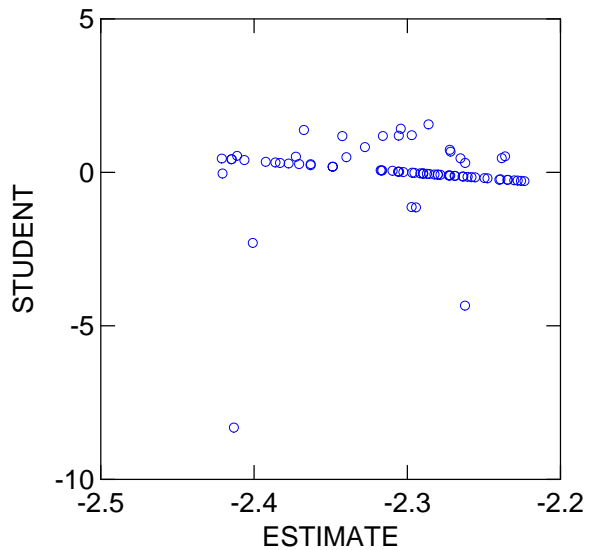
79 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	76
Minimum	-1.586907
Maximum	0.416392
Mean	0.000000
Standard Dev	0.267580

RES	
N of cases	76
Minimum	0.025888
Maximum	2.608510
Mean	1.122215
Standard Dev	0.448095

SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\regr_nh3.syd,
 created Fri Jan 06, 2006 at 15:22:58, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LNH3	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					



Total Nitrogen

6 case(s) deleted due to missing data.

Dep Var: LTPN N: 73 Multiple R: 0.708300 Squared multiple R: 0.501689

Adjusted squared multiple R: 0.456388 Standard error of estimate: 0.198211

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-0.865262	0.242462	0.000000	.	-3.56865	0.00067
LFL_A	-0.206183	0.434396	-0.217139	0.036076	-0.47464	0.63661
LFL_ASQ	-0.190460	0.193862	-0.451283	0.035783	-0.98245	0.32947
SIN_YF	-0.004142	0.033524	-0.011211	0.916955	-0.12355	0.90205
COS_YF	0.277298	0.035117	0.714845	0.921299	7.89649	0.00000
SIN2_YF	-0.007841	0.034685	-0.021382	0.844024	-0.22607	0.82184
COS2_YF	-0.019041	0.035893	-0.048723	0.895095	-0.53050	0.59754

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	2.610552	6	0.435092	11.074576	0.000000
Residual	2.592972	66	0.039287		

*** WARNING ***

Case 39 is an outlier (Studentized Residual = 3.567068)
 Case 72 has large leverage (Leverage = 0.325768)
 Case 77 has large leverage (Leverage = 0.570101)

Durbin-Watson D Statistic 1.507210
 First Order Autocorrelation 0.182478

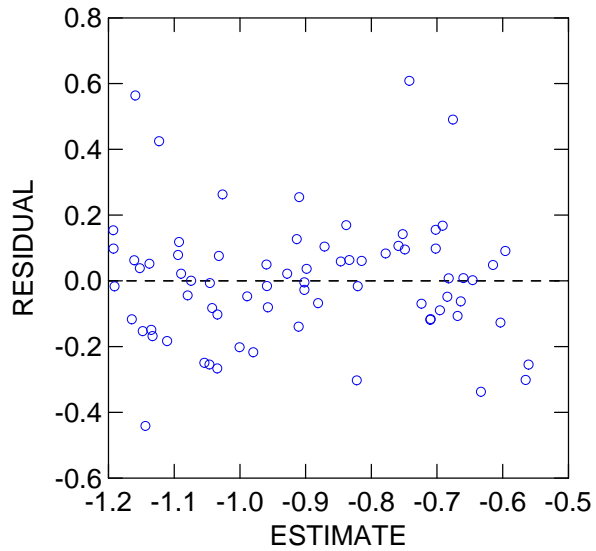
Residuals have been saved.

*** WARNING ***

Case 39 is an outlier (Studentized Residual = 3.567068)
 Case 72 has large leverage (Leverage = 0.325768)
 Case 77 has large leverage (Leverage = 0.570101)

Durbin-Watson D Statistic 1.507210
 First Order Autocorrelation 0.182478

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\REGR_TPN.SYD,
 created Fri Jan 06, 2006 at 15:22:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTPN	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					

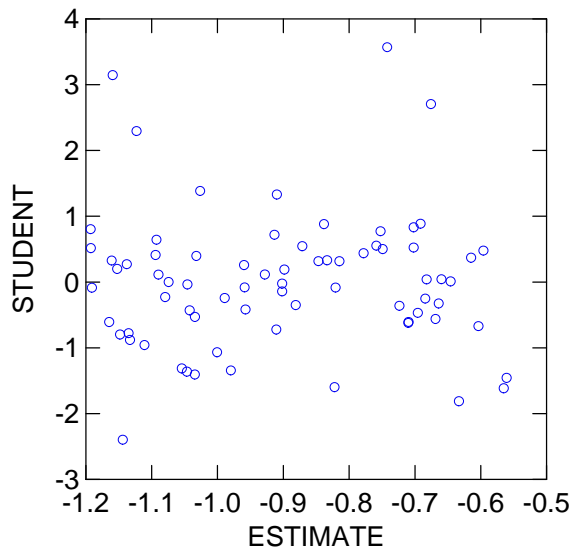
79 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	73
Minimum	-0.441334
Maximum	0.608310
Mean	0.000000
Standard Dev	0.189772

RES	
N of cases	73
Minimum	0.361965
Maximum	4.057977
Mean	1.112883
Standard Dev	0.635592

SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\regr_tpn.syd,
 created Fri Jan 06, 2006 at 15:22:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LTPN	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					



Organic Nitrogen

11 case(s) deleted due to missing data.

Dep Var: LORGN N: 68 Multiple R: 0.499799 Squared multiple R: 0.249799

Adjusted squared multiple R: 0.176009 Standard error of estimate: 0.572718

Effect	Coefficient	Std Error	Std Coef	Tolerance	t	P(2 Tail)
CONSTANT	-1.495798	0.703416	0.000000	.	-2.12648	0.03752
LFL_A	-1.180466	1.258130	-0.536622	0.037598	-0.93827	0.35181
LFL_ASQ	-1.007852	0.561860	-1.030053	0.037296	-1.79378	0.07781
SIN_YF	-0.029717	0.099355	-0.034583	0.919925	-0.29910	0.76588
COS_YF	0.243736	0.106095	0.265174	0.923070	2.29733	0.02505
SIN2_YF	0.048596	0.103294	0.056865	0.841796	0.47046	0.63971
COS2_YF	-0.021061	0.108144	-0.022734	0.902441	-0.19475	0.84624

Analysis of Variance

Source	Sum-of-Squares	df	Mean-Square	F-ratio	P
Regression	6.662306	6	1.110384	3.385255	0.006018
Residual	20.008372	61	0.328006		

*** WARNING ***

Case 37 is an outlier (Studentized Residual = -3.584564)
 Case 71 is an outlier (Studentized Residual = -4.287177)
 Case 72 has large leverage (Leverage = 0.331577)
 Case 77 has large leverage (Leverage = 0.583113)

Durbin-Watson D Statistic 2.119883
 First Order Autocorrelation -0.081124

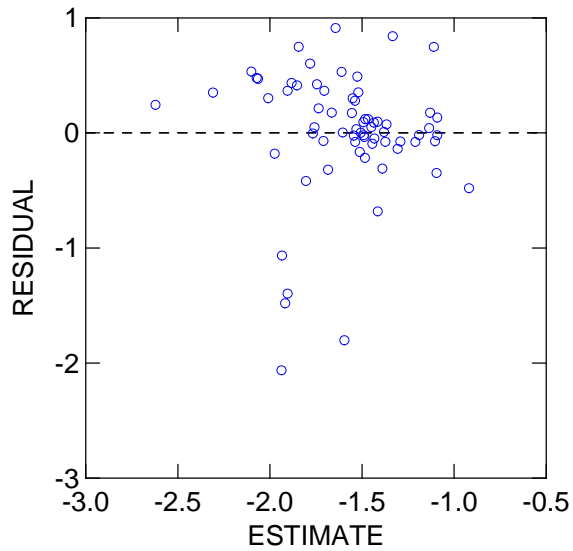
Residuals have been saved.

*** WARNING ***

Case 37 is an outlier (Studentized Residual = -3.584564)
 Case 71 is an outlier (Studentized Residual = -4.287177)
 Case 72 has large leverage (Leverage = 0.331577)
 Case 77 has large leverage (Leverage = 0.583113)

Durbin-Watson D Statistic 2.119883
 First Order Autocorrelation -0.081124

Plot of residuals against predicted values



SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\REGR_ON1.SYD, created Fri Jan 06, 2006 at 15:22:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LORGN	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					

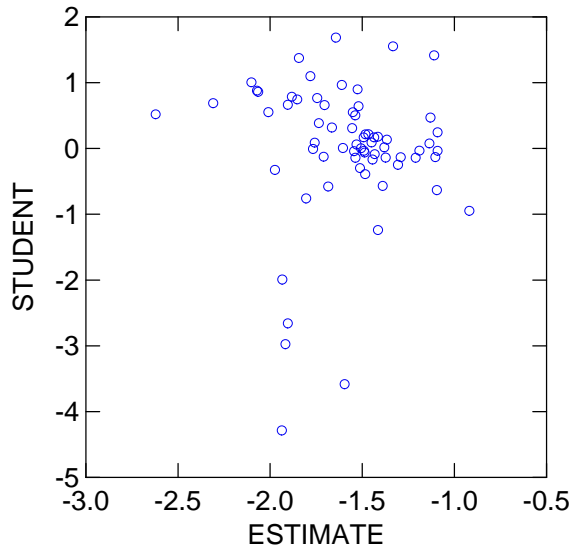
79 cases and 14 variables processed and saved.

RESIDUAL	
N of cases	68
Minimum	-2.063575
Maximum	0.910150
Mean	0.000000
Standard Dev	0.546473

RES	
N of cases	68
Minimum	0.008638
Maximum	8.131109
Mean	1.629556
Standard Dev	1.549428

SYSTAT Rectangular file D:\My Documents\Lake What 05\Surf Inflow\MFdiversion\regr_on1.syd,
 created Fri Jan 06, 2006 at 15:22:59, contains variables:

ESTIMATE	RESIDUAL	LEVERAGE	COOK	STUDENT	SEPREP
LORGN	LFL_A	LFL_ASQ	SINYF	COSYF	SIN2YF
COS2YF					



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