

COEUR D'ALENE LAKE TOTAL PHOSPHORUS NUTRIENT CALCULATIONS FOR LAKE TRIBUTARIES

July 2017 update for orthoTP

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OLS approaches requested:

1. OLS model with wetland variables in the dataset: Model 1
2. OLS model without wetland variables in the dataset: Models 2 - 10
3. OLS model with wetland variables in the dataset & with stream gradient in the model:
Model 11
4. OLS model without wetland variables in the dataset & with stream gradient in the
model: Model 6.
5. OLS model with wetland variables in the dataset & with % developed in the model:
Model 1
6. OLS model without wetland variables in the dataset & with % developed in the model:
Model 2, 4, 5, 6, 7

Results 1: OLS Model 1

Call:

```
lm(formula = TP.coeff.ortho ~ wetlands.total + Stream_density24k +
  soil_types41_45 + Developed.low + Total.crops + Road_density +
  soil_types51_60 + True.herb, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	20.202	2.770	7.29	0.00532 **
wetlands.total	2466.795	170.179	14.50	0.00071 ***
Stream_density24k	-11.979	1.300	-9.21	0.00270 **
soil_types41_45	3.436	1.776	1.94	0.14844
Developed.low	-33.116	23.824	-1.39	0.25870
Total.crops	321.464	78.124	4.11	0.02600 *
Road_density	1.528	0.441	3.46	0.04053 *
soil_types51_60	-2.214	1.844	-1.20	0.31611
True.herb	-121.785	36.744	-3.31	0.04524 *

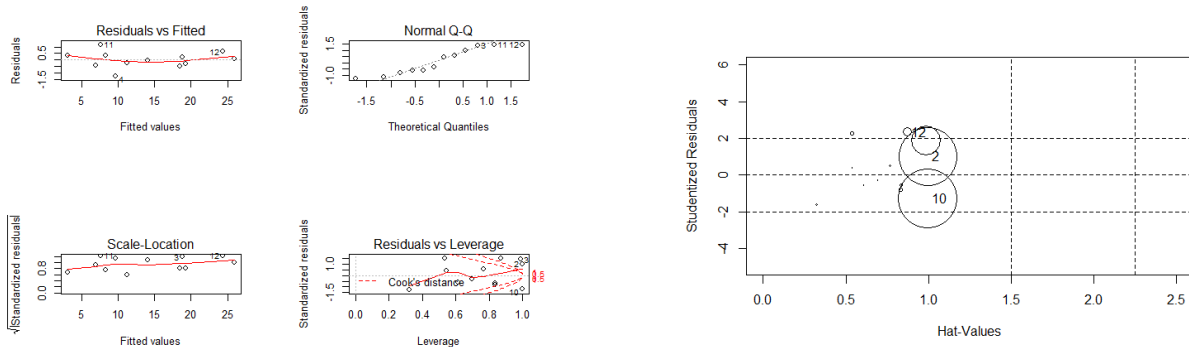
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.18 on 3 degrees of freedom
 Multiple R-squared: 0.993, Adjusted R-squared: 0.974
 F-statistic: 53.1 on 8 and 3 DF, p-value: 0.0038

RMSE = 0.59

AIC = 41.4

BIC = 46.2



Results 2: OLS Model 2

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Stream_length24k +
    True.shrub + Road_length200 + soil_types41_45 + Road_density +
    Total.crops + Undeveloped, data = data)
```

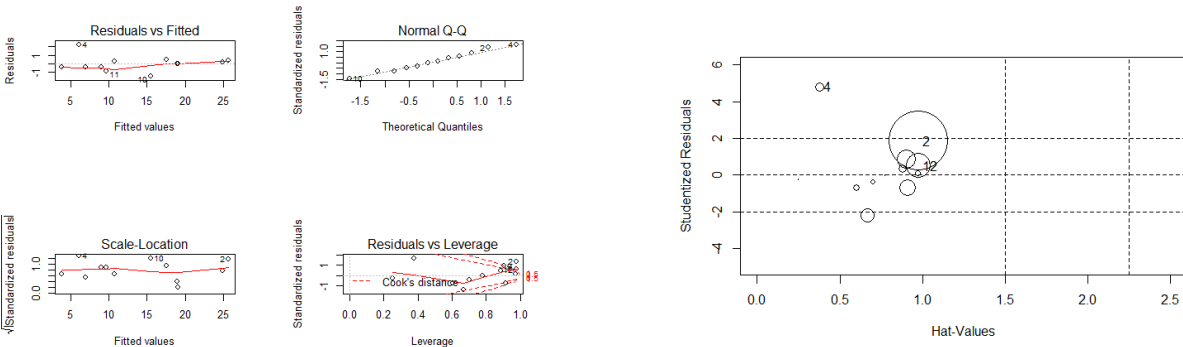
Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	17.7399	13.7853	1.29	0.2884
Stream_density24k	-2.9001	2.1572	-1.34	0.2714
Stream_length24k	0.2285	0.0251	9.11	0.0028 **
True.shrub	20.9288	8.3436	2.51	0.0871 .
Road_length200	-0.6645	0.0882	-7.53	0.0048 **
soil_types41_45	4.8375	1.7527	2.76	0.0701 .
Road_density	2.3991	1.2005	2.00	0.1395
Total.crops	350.7679	123.7502	2.83	0.0659 .
Undeveloped	-14.5965	12.7822	-1.14	0.3364

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.72 on 3 degrees of freedom
 Multiple R-squared: 0.985, Adjusted R-squared: 0.945
 F-statistic: 24.8 on 8 and 3 DF, p-value: 0.0116

RMSE= 0.86
 AIC = 50.4
 BIC = 55.3



Results 3: OLS Model 3

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Stream_length24k +
    Road_length200 + soil_types41_45 + Road_density + Total.crops +
    Total_true.forest, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	19.7123	9.7225	2.03	0.11253
Stream_density24k	-2.4053	1.9278	-1.25	0.28020
Stream_length24k	0.2303	0.0248	9.29	0.00075 ***
Road_length200	-0.6860	0.0806	-8.51	0.00105 **
soil_types41_45	4.5764	1.7369	2.63	0.05789 .
Road_density	2.4786	1.1559	2.14	0.09861 .
Total.crops	330.7730	126.7738	2.61	0.05947 .
Total_true.forest	-17.1606	7.3359	-2.34	0.07944 .

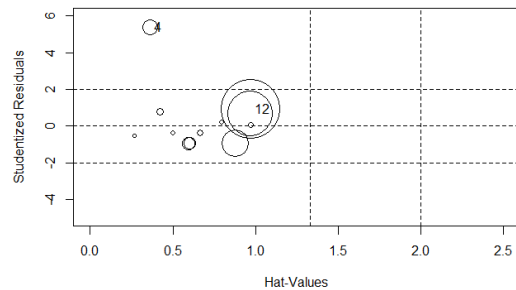
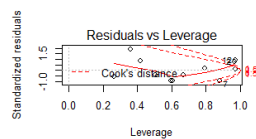
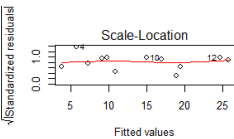
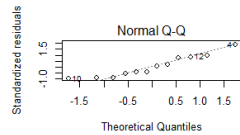
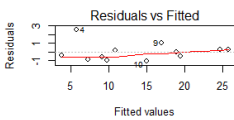
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.71 on 4 degrees of freedom
 Multiple R-squared: 0.98, Adjusted R-squared: 0.946
 F-statistic: 28.5 on 7 and 4 DF, p-value: 0.00295

RMSE= 0.988

AIC = 51.8

BIC = 56.1



Results 4: OLS Model 4

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Stream_length24k +
    True.shrub + Road_length200 + soil_types41_45 + soil_types51_60 +
    Total.crops + Undeveloped, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	30.1017	5.9307	5.08	0.01477 *
Stream_density24k	-4.6294	1.4518	-3.19	0.04976 *
Stream_length24k	0.2047	0.0149	13.75	0.00083 ***
True.shrub	40.4386	4.4075	9.17	0.00274 **
Road_length200	-0.6451	0.0570	-11.33	0.00148 **
soil_types41_45	10.3925	1.8104	5.74	0.01050 *
soil_types51_60	6.7247	1.7829	3.77	0.03262 *
Total.crops	256.9713	50.0057	5.14	0.01428 *
Undeveloped	-26.4041	6.4187	-4.11	0.02602 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.1 on 3 degrees of freedom

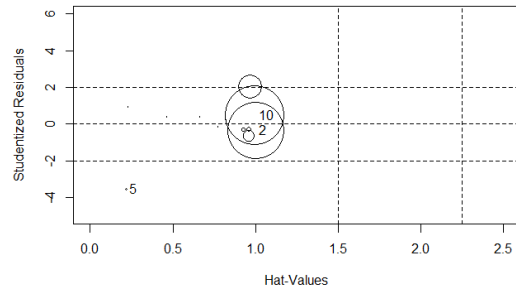
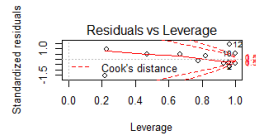
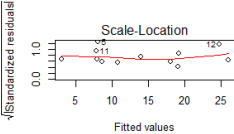
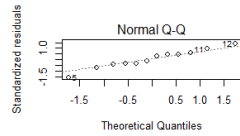
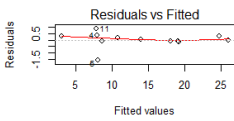
Multiple R-squared: 0.994, Adjusted R-squared: 0.978

F-statistic: 61.6 on 8 and 3 DF, p-value: 0.00305

RMSE= 0.548

AIC = 39.6

BIC = 44.5



Results 5: OLS Model 5

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_length24k + Road_length200 +
    soil_types41_45 + Developed.low + Total.crops + Total_true.forest +
    Total.harvest.forest + Undeveloped, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-432.9539	79.0998	-5.47	0.01199 *
Stream_length24k	0.2588	0.0136	19.02	0.00032 ***
Road_length200	-1.0350	0.0619	-16.72	0.00047 ***
soil_types41_45	12.6860	1.5310	8.29	0.00368 **
Developed.low	1040.2434	174.4603	5.96	0.00944 **
Total.crops	434.6316	66.2896	6.56	0.00721 **
Total_true.forest	-27.8580	2.8989	-9.61	0.00239 **
Total.harvest.forest	475.1797	79.3959	5.98	0.00934 **
Undeveloped	469.0526	79.6801	5.89	0.00978 **

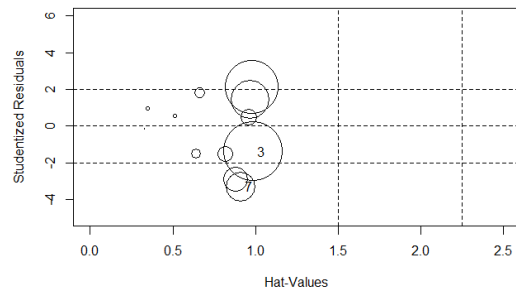
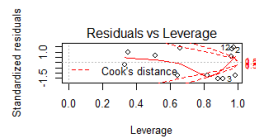
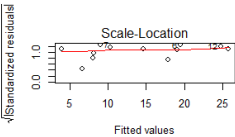
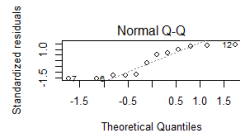
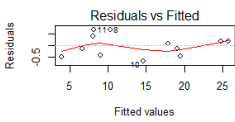
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.881 on 3 degrees of freedom
 Multiple R-squared: 0.996, Adjusted R-squared: 0.986
 F-statistic: 95.6 on 8 and 3 DF, p-value: 0.00159

RMSE= 0.441

AIC = 34.4

BIC = 39.2



Results 6: OLS Model 6

Call:

```
lm(formula = TP.coeff.ortho ~ Road_length200 + Road_length +
    True.shrub + True.herb + Total.harvest.forest + Stream_gradient +
    Mixed.forest, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	56.6627	9.6059	5.90	0.00413	**
Road_length200	-1.2235	0.0668	-18.31	0.000052	***
Road_length	0.1560	0.0174	8.99	0.00085	***
True.shrub	-34.1587	9.9240	-3.44	0.02624	*
True.herb	85.5633	26.7945	3.19	0.03311	*
Total.harvest.forest	-52.5365	14.9392	-3.52	0.02452	*
Stream_gradient	-3.7181	0.8779	-4.24	0.01331	*
Mixed.forest	-32942.6986	5099.5406	-6.46	0.00296	**

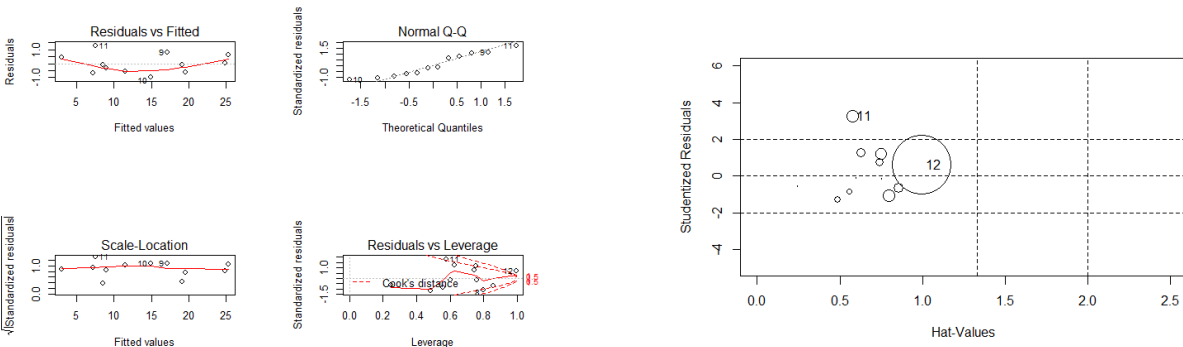
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.14 on 4 degrees of freedom
 Multiple R-squared: 0.991, Adjusted R-squared: 0.976
 F-statistic: 65.2 on 7 and 4 DF, p-value: 0.000586

RMSE= 0.657

AIC = 42

BIC = 46.3



Results 7: OLS Model 7

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Stream_length24k +
    Road_length200 + Total.true.open + soil_types41_45 + soil_types51_60 +
    Total.crops + Undeveloped, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	28.4450	9.1458	3.11	0.0529 .
Stream_density24k	-4.5716	2.2049	-2.07	0.1298
Stream_length24k	0.2038	0.0226	9.03	0.0029 **
Road_length200	-0.6614	0.0858	-7.71	0.0045 **
Total.true.open	37.4842	6.3438	5.91	0.0097 **
soil_types41_45	9.9704	2.7273	3.66	0.0353 *
soil_types51_60	6.7215	2.7185	2.47	0.0899 .
Total.crops	204.3032	74.5449	2.74	0.0713 .
Undeveloped	-24.3333	9.8289	-2.48	0.0896 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.66 on 3 degrees of freedom

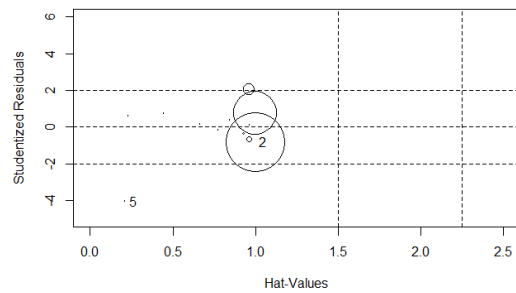
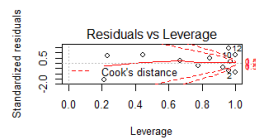
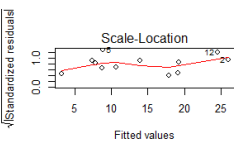
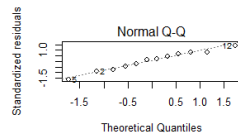
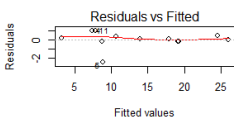
Multiple R-squared: 0.986, Adjusted R-squared: 0.949

F-statistic: 26.6 on 8 and 3 DF, p-value: 0.0105

RMSE= 0.831

AIC = 49.6

BIC = 54.5



Results 8: OLS Model 8

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Road_length +
    Road_length200 + soil_types41_45 + soil_types51_60 + Total.crops +
    Total.true.forest + Total.harvest.forest, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	35.39694	2.97286	11.91	0.00127	**
Stream_density24k	-4.19853	1.28313	-3.27	0.04670	*
Road_length	0.14335	0.00903	15.87	0.00054	***
Road_length200	-0.77333	0.06301	-12.27	0.00116	**
soil_types41_45	8.18318	1.29760	6.31	0.00806	**
soil_types51_60	3.89636	1.27346	3.06	0.05501	.
Total.crops	249.93914	36.49952	6.85	0.00637	**
Total.true.forest	-26.54283	2.34972	-11.30	0.00149	**
Total.harvest.forest	-19.64568	8.70988	-2.26	0.10937	

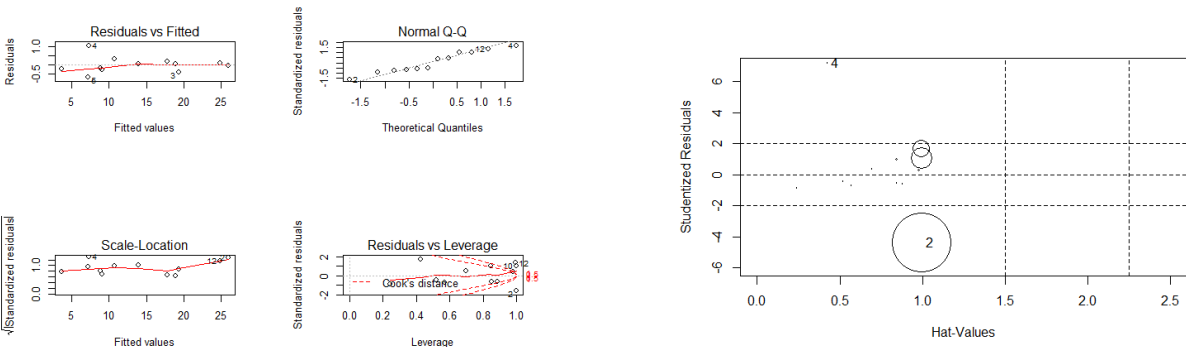
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.843 on 3 degrees of freedom
 Multiple R-squared: 0.996, Adjusted R-squared: 0.987
 F-statistic: 104 on 8 and 3 DF, p-value: 0.00139

RMSE= 0.422

AIC = 33.3

BIC = 38.2



Results 9: OLS Model 9

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Road_length +
    Road_length200 + Evergreen.forest + soil_types41_45 + soil_types51_60 +
    Total.crops + Total.harvest.forest, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	35.51896	2.99180	11.87	0.00129 **
Stream_density24k	-4.27016	1.29032	-3.31	0.04541 *
Road_length	0.14298	0.00907	15.77	0.00055 ***
Road_length200	-0.77026	0.06333	-12.16	0.00120 **
Evergreen.forest	-26.56238	2.36120	-11.25	0.00151 **
soil_types41_45	8.16562	1.30250	6.27	0.00819 **
soil_types51_60	3.87590	1.27805	3.03	0.05619 .
Total.crops	250.56947	36.64688	6.84	0.00640 **
Total.harvest.forest	-20.00218	8.75819	-2.28	0.10656

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.846 on 3 degrees of freedom

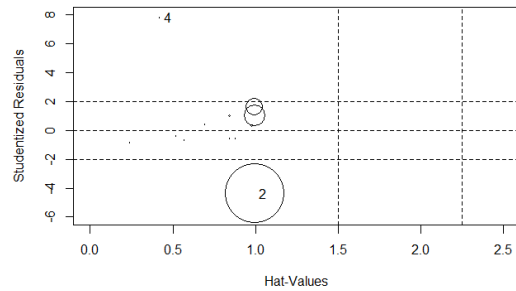
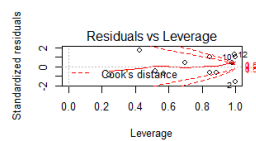
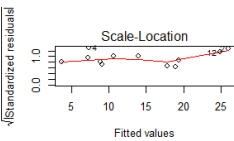
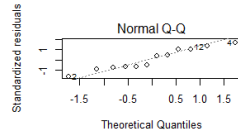
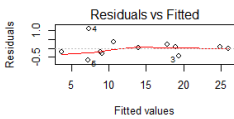
Multiple R-squared: 0.996, Adjusted R-squared: 0.987

F-statistic: 104 on 8 and 3 DF, p-value: 0.00141

RMSE= 0.423

AIC = 33.4

BIC = 38.3



Results 10: OLS Model 10

Call:

```
lm(formula = TP.coeff.ortho ~ Stream_density24k + Evergreen.forest +  
  soil_types41_45 + Road_density + Total_true.forest + Stream_gradient +  
  Total.harvest.forest, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	104.367	7.835	13.32	0.00018 ***
Stream_density24k	-24.059	2.639	-9.12	0.00080 ***
Evergreen.forest	-8000.690	1162.276	-6.88	0.00233 **
soil_types41_45	6.151	2.178	2.82	0.04766 *
Road_density	-4.344	0.747	-5.81	0.00436 **
Total_true.forest	7949.141	1159.466	6.86	0.00237 **
Stream_gradient	-0.986	0.541	-1.82	0.14232
Total.harvest.forest	-109.688	14.407	-7.61	0.00160 **

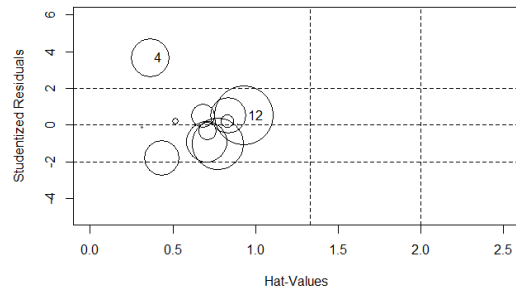
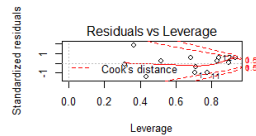
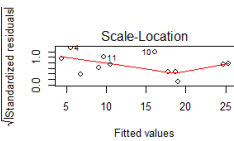
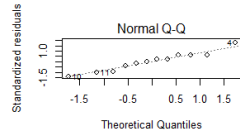
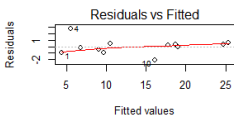
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.95 on 4 degrees of freedom
Multiple R-squared: 0.974, Adjusted R-squared: 0.93
F-statistic: 21.8 on 7 and 4 DF, p-value: 0.00492

RMSE= 1.13

AIC = 54.9

BIC = 59.3



Results 11: OLS Model 11

Call:

```
lm(formula = TP.coeff.ortho ~ wetlands.total + Stream_density24k +
    Road_density200 + Road_length200 + Stream_gradient + Developed.low +
    Total.crops + Harvest.evergreen, data = data)
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	10.840	4.173	2.60	0.0805 .
wetlands.total	3704.763	358.871	10.32	0.0019 **
Stream_density24k	-26.337	3.369	-7.82	0.0044 **
Road_density200	8.646	1.898	4.56	0.0198 *
Road_length200	0.369	0.120	3.08	0.0541 .
Stream_gradient	3.166	0.703	4.50	0.0205 *
Developed.low	-96.592	25.112	-3.85	0.0310 *
Total.crops	215.802	55.695	3.87	0.0304 *
Harvest.evergreen	-32.207	19.114	-1.68	0.1906

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.19 on 3 degrees of freedom

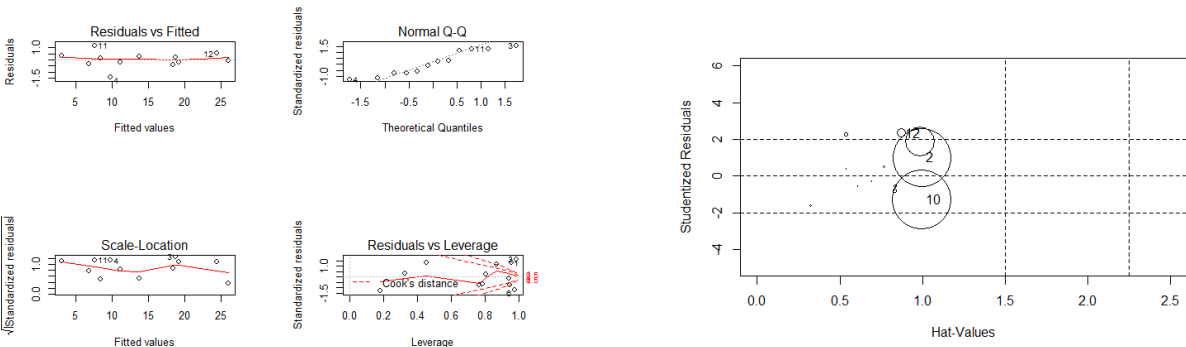
Multiple R-squared: 0.993, Adjusted R-squared: 0.974

F-statistic: 52.1 on 8 and 3 DF, p-value: 0.00391

RMSE= 0.596

AIC = 41.6

BIC = 46.5



Results 12: Model averaging coefficients

Models 2 to 11 (no wetlands variables):

Model-averaged coefficients:
(full average)

	Estimate	Std. Error	Adjusted SE	z value	Pr(> z)	
(Intercept)	5.65e+01	1.03e+01	1.41e+01	4.01	<2e-16	***
Road_length200	-1.22e+00	9.42e-02	1.16e-01	10.53	<2e-16	***
Road_length	1.55e-01	2.27e-02	2.85e-02	5.42	<2e-16	***
True.shrub	-3.39e+01	1.04e+01	1.44e+01	2.36	0.018	*
True.herb	8.48e+01	2.79e+01	3.86e+01	2.19	0.028	*
Total.harvest.forest	-5.22e+01	1.57e+01	2.17e+01	2.41	0.016	*
Stream_gradient	-3.69e+00	9.36e-01	1.28e+00	2.87	0.004	**
Mixed.forest	-3.26e+04	5.95e+03	7.83e+03	4.17	<2e-16	***
Stream_density24k	-5.47e-02	9.83e-01	1.00e+00	0.05	0.956	
Stream_length24k	1.70e-03	1.98e-02	1.99e-02	0.09	0.932	
soil_types41_45	4.33e-02	4.90e-01	5.20e-01	0.08	0.934	
Road_density	1.16e-02	2.91e-01	3.09e-01	0.04	0.970	
Total.crops	2.44e+00	3.03e+01	3.23e+01	0.08	0.940	
Total.true.forest	1.21e+01	3.15e+02	3.18e+02	0.04	0.970	
Evergreen.forest	-1.23e+01	3.17e+02	3.20e+02	0.04	0.969	
soil_types51_60	3.49e-26	3.92e-13	4.22e-13	0.00	1.000	
Developed.low	2.71e-24	5.38e-11	5.50e-11	0.00	1.000	
Undeveloped	1.22e-24	2.43e-11	2.48e-11	0.00	1.000	
Total.true.open	4.80e-29	4.30e-14	4.40e-14	0.00	1.000	

(conditional average)

	Estimate	Std. Error	Adjusted SE	z value	Pr(> z)	
(Intercept)	56.4630	10.2851	14.0941	4.01	<2e-16	***
Road_length200	-1.2196	0.0812	0.1054	11.57	<2e-16	***
Road_length	0.1560	0.0174	0.0246	6.35	<2e-16	***
True.shrub	-34.1587	9.9240	14.0581	2.43	0.015	*
True.herb	85.5633	26.7945	37.9566	2.25	0.024	*
Total.harvest.forest	-52.6249	15.1063	21.2803	2.47	0.013	*
Stream_gradient	-3.7139	0.8840	1.2476	2.98	0.003	**
Mixed.forest	-32942.6986	5099.5406	7223.9055	4.56	<2e-16	***
Stream_density24k	-6.1321	8.4312	8.6827	0.71	0.480	
Stream_length24k	0.2303	0.0248	0.0351	6.56	<2e-16	***
soil_types41_45	4.8474	1.9151	2.6465	1.83	0.067	.
Road_density	1.3044	2.7989	3.0074	0.43	0.664	
Total.crops	330.7730	126.7738	179.5851	1.84	0.065	.
Total.true.forest	1353.8850	3045.2936	3083.3067	0.44	0.661	
Evergreen.forest	-8000.6899	1162.2760	1646.4566	4.86	<2e-16	***
soil_types51_60	3.9475	1.3533	2.1331	1.85	0.064	.
Developed.low	1040.2434	174.4603	283.2758	3.67	<2e-16	***
Undeveloped	435.1726	146.8115	176.7418	2.46	0.014	*
Total.true.open	37.4842	6.3438	10.3005	3.64	<2e-16	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

All models (1 to 11):

Model-averaged coefficients:
(full average)

	Estimate	Std. Error	Adjusted SE	z value	Pr(> z)	
(Intercept)	5.65e+01	1.03e+01	1.41e+01	4.01	<2e-16	***
Road_length200	-1.22e+00	9.42e-02	1.16e-01	10.53	<2e-16	***
Road_length	1.55e-01	2.27e-02	2.85e-02	5.42	<2e-16	***
True.shrub	-3.39e+01	1.04e+01	1.44e+01	2.36	0.018	*
True.herb	8.48e+01	2.79e+01	3.86e+01	2.19	0.028	*
Total.harvest.forest	-5.22e+01	1.57e+01	2.17e+01	2.41	0.016	*
Stream_gradient	-3.69e+00	9.36e-01	1.28e+00	2.87	0.004	**
Mixed.forest	-3.26e+04	5.95e+03	7.83e+03	4.17	<2e-16	***
Stream_density24k	-5.47e-02	9.83e-01	1.00e+00	0.05	0.956	
Stream_length24k	1.70e-03	1.98e-02	1.99e-02	0.09	0.932	
soil_types41_45	4.33e-02	4.90e-01	5.20e-01	0.08	0.934	
Road_density	1.16e-02	2.91e-01	3.09e-01	0.04	0.970	
Total.crops	2.44e+00	3.03e+01	3.23e+01	0.08	0.940	
Total.true.forest	1.21e+01	3.15e+02	3.18e+02	0.04	0.970	
Evergreen.forest	-1.23e+01	3.17e+02	3.20e+02	0.04	0.969	
soil_types51_60	3.47e-26	3.93e-13	4.23e-13	0.00	1.000	
Developed.low	2.70e-24	5.38e-11	5.50e-11	0.00	1.000	
Undeveloped	1.22e-24	2.43e-11	2.48e-11	0.00	1.000	
wetlands.total	4.51e-25	3.80e-11	3.82e-11	0.00	1.000	
Road_density200	6.02e-28	7.39e-14	7.66e-14	0.00	1.000	
Harvest.evergreen	-2.24e-27	3.13e-13	3.73e-13	0.00	1.000	
Total.true.open	4.80e-29	4.30e-14	4.40e-14	0.00	1.000	

(conditional average)

	Estimate	Std. Error	Adjusted SE	z value	Pr(> z)	
(Intercept)	56.4630	10.2851	14.0941	4.01	<2e-16	***
Road_length200	-1.2196	0.0812	0.1054	11.57	<2e-16	***
Road_length	0.1560	0.0174	0.0246	6.35	<2e-16	***
True.shrub	-34.1587	9.9240	14.0581	2.43	0.015	*
True.herb	85.5633	26.7945	37.9566	2.25	0.024	*
Total.harvest.forest	-52.6249	15.1063	21.2803	2.47	0.013	*
Stream_gradient	-3.7139	0.8840	1.2476	2.98	0.003	**
Mixed.forest	-32942.6986	5099.5406	7223.9055	4.56	<2e-16	***
Stream_density24k	-6.1321	8.4312	8.6827	0.71	0.480	
Stream_length24k	0.2303	0.0248	0.0351	6.56	<2e-16	***
soil_types41_45	4.8474	1.9151	2.6465	1.83	0.067	.
Road_density	1.3044	2.7989	3.0074	0.43	0.664	
Total.crops	330.7730	126.7738	179.5851	1.84	0.065	.
Total.true.forest	1353.8850	3045.2936	3083.3067	0.44	0.661	
Evergreen.forest	-8000.6899	1162.2760	1646.4566	4.86	<2e-16	***
soil_types51_60	3.8934	1.4750	2.2180	1.76	0.079	.
Developed.low	980.9492	301.3091	371.4452	2.64	0.008	**
Undeveloped	435.1726	146.8115	176.7418	2.46	0.014	*
wetlands.total	3049.7673	676.6205	762.9813	4.00	<2e-16	***
Road_density200	8.6465	1.8976	3.0811	2.81	0.005	**
Harvest.evergreen	-32.2070	19.1141	31.0360	1.04	0.299	
Total.true.open	37.4842	6.3438	10.3005	3.64	<2e-16	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Figure 1: Observed vs. predicted for OLS models

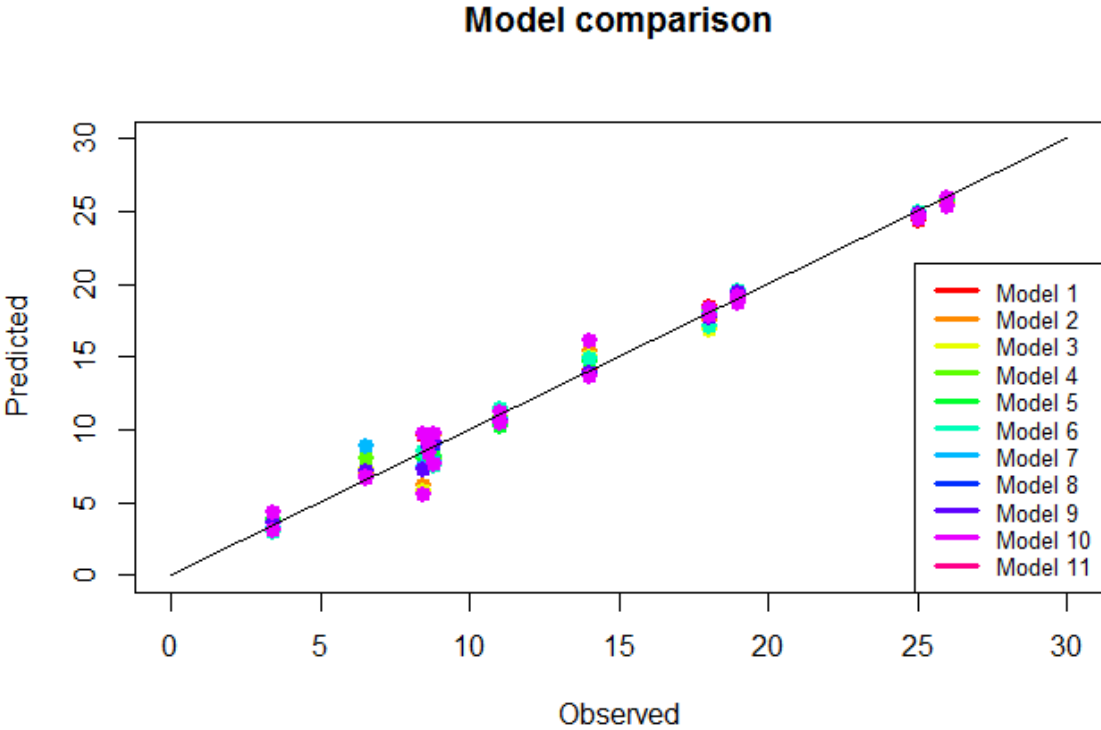


Table 1: Model comparison

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
adj-R ²	0.974	0.945	0.946	0.978	0.986	0.976	0.949	0.987	0.987	0.93	0.974
RMSE	0.59	0.86	0.99	0.55	0.44	0.657	0.831	0.422	0.423	1.13	0.596
AIC*	41.4	50.4	51.8	39.6	34.4	42.0	49.6	33.3	33.4	54.9	41.6
BIC*	46.2	55.3	56.1	44.5	39.2	46.3	54.5	38.2	38.3	59.3	46.5