APPENDIX I

Statistical Analysis: Cover Type vs. Ground Elevation

COVER TYPE VS. ELEVATION

WED 3/20/96 15:35:49 C:\SYSTATW5\9338\ELEV

		ACRES	C	D	ELEV$	L	M	ML50
CASE	1	52.74	0.00	4.10	2 feet	13.02	35.62	0.00
CASE	2	866.90	0.00	103.42	3 feet	342.00	421.48	0.00
CASE	3	24452.09	79.88	4925.64	4 feet	4006.26	12720.44	2551.37
CASE	4	14785.24	60.36	241.79	5 feet	18.74	4990.17	9422.04

4 CASES AND 7 VARIABLES PROCESSED.
NO SYSTAT FILE CREATED.

WED 3/20/96 15:36:33 C:\SYSTATW5\9338\ELEV

M

MODEL CONTAINS NO CONSTANT.

DEP VAR: M N: 4 MULTIPLE R: 0.986 SQUARED MULTIPLE R: 0.971
ADJUSTED SQUARED MULTIPLE R: .971 STANDARD ERROR OF ESTIMATE: 1334.6708

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.4713	0.0467	0.9856	1.0000	10.0953	0.0021

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	.181546E+09	1	.181546E+09	101.9152	0.0021
RESIDUAL	.534404E+07	3	.178135E+07		

WED 3/20/96 15:36:50 C:\SYSTATW5\9338\ELEV

ML50

MODEL CONTAINS NO CONSTANT.

DEP VAR: ML50 N: 4 MULTIPLE R: 0.723 SQUARED MULTIPLE R: 0.522
ADJUSTED SQUARED MULTIPLE R: .522 STANDARD ERROR OF ESTIMATE: 3894.7864

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.2468	0.1362	0.7228	1.0000	1.8115	0.1677

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	.497762E+08	1	.497762E+08	3.2814	0.1677
RESIDUAL	.455081E+08	3	.151694E+08		

WED 3/20/96 15:37:02 C:\SYSTATW5\9338\ELEV

D

MODEL CONTAINS NO CONSTANT.

DEP VAR: D N: 4 MULTIPLE R: 0.880 SQUARED MULTIPLE R: 0.775
ADJUSTED SQUARED MULTIPLE R: .775 STANDARD ERROR OF ESTIMATE: 1352.1085

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.1519	0.0473	0.8801	1.0000	3.2107	0.0489

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	.188465E+08	1	.188465E+08	10.3088	0.0489
RESIDUAL	.548459E+07	3	.182820E+07		

CO\ R TYPE VS. ELEVATION

WED 3/20/96 15:37:12 C:\SYSTATW5\9338\ELEV

L

MODEL CONTAINS NO CONSTANT.

DEP VAR: L N: 4 MULTIPLE R: 0.857 SQUARED MULTIPLE R: 0.735
ADJUSTED SQUARED MULTIPLE R: .735 STANDARD ERROR OF ESTIMATE: 1195.4576

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.1206	0.0418	0.8572	1.0000	2.8832	0.0634

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	.118802E+08	1	.118802E+08	8.3130	0.0634
RESIDUAL	.428736E+07	3	.142912E+07		

WED 3/20/96 15:37:22 C:\SYSTATW5\9338\ELEV

C

MODEL CONTAINS NO CONSTANT.

DEP VAR: C N: 4 MULTIPLE R: 0.994 SQUARED MULTIPLE R: 0.988
ADJUSTED SQUARED MULTIPLE R: .988 STANDARD ERROR OF ESTIMATE: 6.2089

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.0035	0.0002	0.9942	1.0000	16.0321	0.0005

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	9908.4929	1	9908.4929	257.0272	0.0005
RESIDUAL	115.6511	3	38.5504		

WED 3/20/96 16:33:26 C:\SYSTATW5\9338\ELEV

TI

		ACRES	ELEV$	TI
CASE	1	52.74	2 feet	0.00
CASE	2	866.90	3 feet	0.00
CASE	3	24452.09	4 feet	168.50
CASE	4	14785.24	5 feet	52.14

4 CASES AND 8 VARIABLES PROCESSED.
NO SYSTAT FILE CREATED.

WED 3/20/96 16:33:54 C:\SYSTATW5\9338\ELEV

MODEL CONTAINS NO CONSTANT.

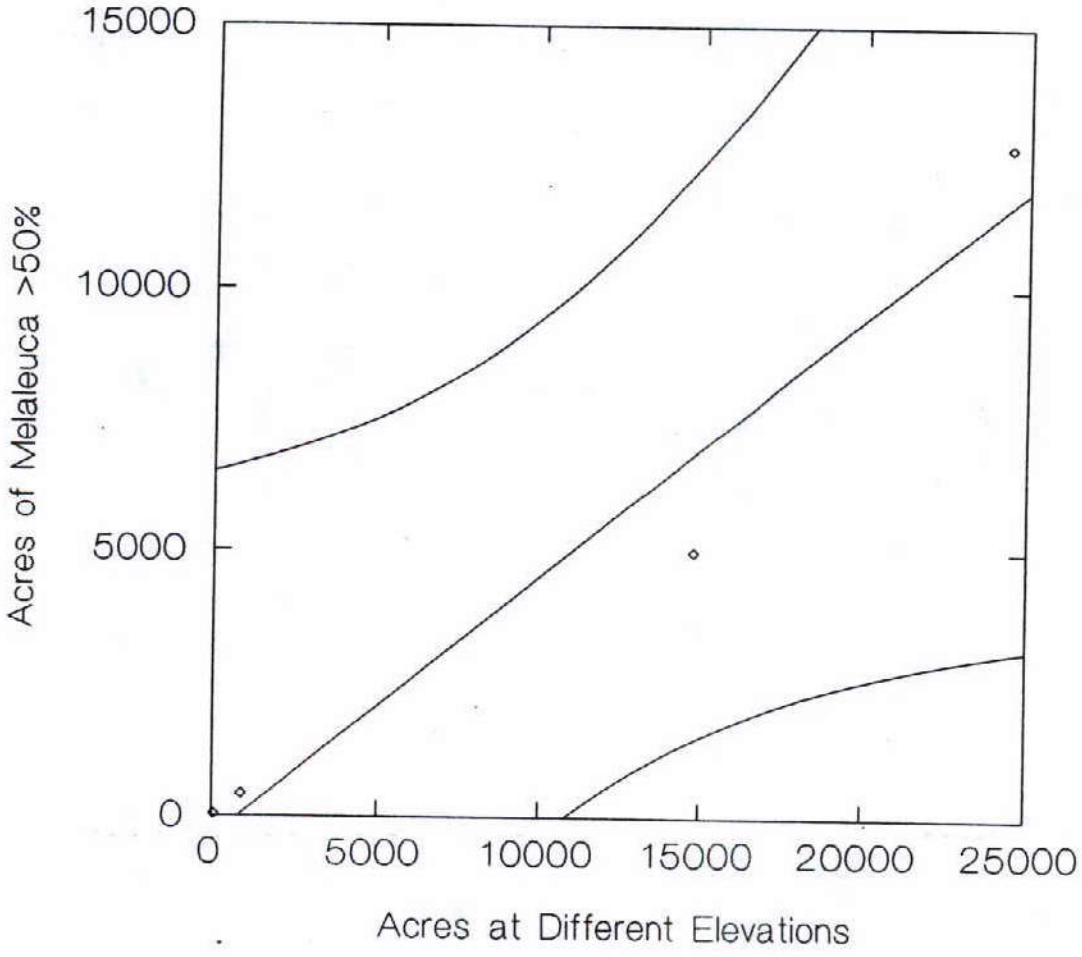
DEP VAR: TI N: 4 MULTIPLE R: 0.970 SQUARED MULTIPLE R: 0.941
ADJUSTED SQUARED MULTIPLE R: .941 STANDARD ERROR OF ESTIMATE: 24.7597

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
ACRES	0.0060	0.0009	0.9700	1.0000	6.9100	0.0062

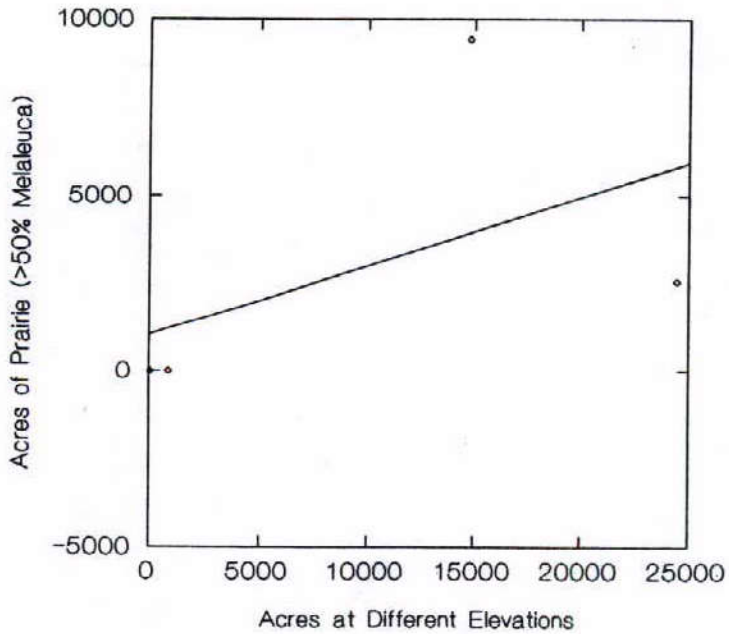
ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	29271.7023	1	29271.7023	47.7482	0.0062
RESIDUAL	1839.1273	3	613.0424		

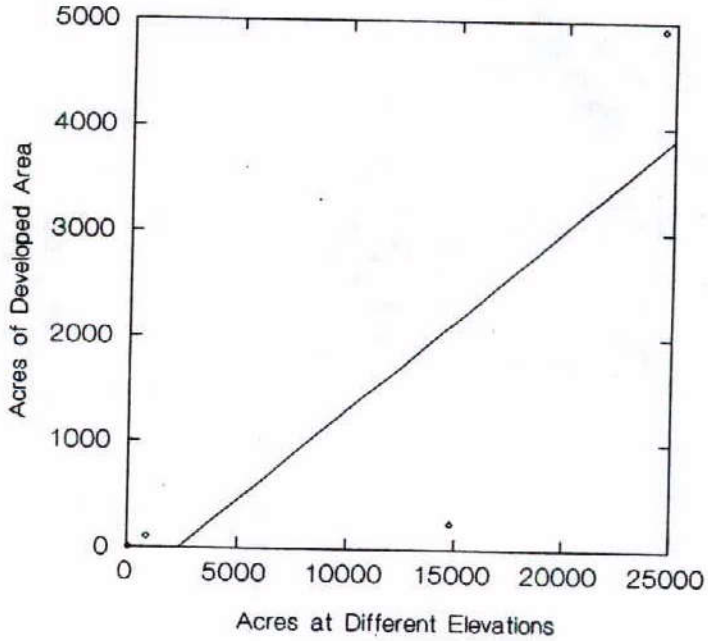
Melaleuca Acreage vs Elevation Acreage



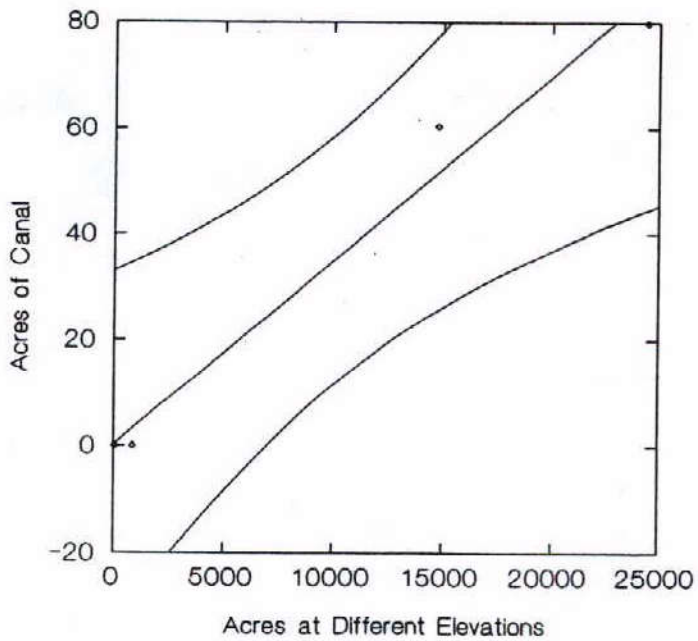
Prairie Acreage vs Elevation Acreage



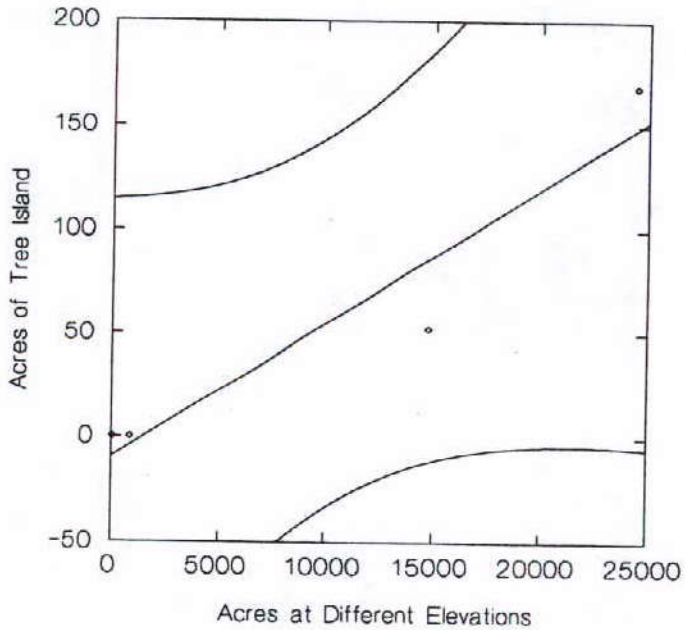
Developed Acreage vs Elevation Acreage



Canal Acreage vs Elevation Acreage



Tree Island Acreage vs Elevation Acreage



APPENDIX J

Statistical Analysis: Ground Elevation vs. Time

Groundwater Elevation vs. Time

```
WED 3/13/96 17:04:57    C:\SYSTATW5\9338\HYDRODAT.SYS
     8 CASES DELETED DUE TO MISSING DATA.

DEP VAR:    G1488       N:       22  MULTIPLE R: 0.260  SQUARED MULTIPLE R: 0.068
ADJUSTED SQUARED MULTIPLE R:  .021     STANDARD ERROR OF ESTIMATE:  0.515684220

VARIABLE       COEFFICIENT     STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        .473842E+02  .343389E+02  0.000000000  .          1.37990  0.18285
YEAR           -0.020892151  0.017329641 -0.260282799  .100E+01 -1.20557  0.24205

                         ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE     F-RATIO        P

REGRESSION      0.386504800     1  0.386504800 1.453406865 0.242052208
RESIDUAL        5.318604291    20  0.265930215
```

G-1488

```
WED 3/13/96 17:05:36    C:\SYSTATW5\9338\HYDRODAT.SYS
    11 CASES DELETED DUE TO MISSING DATA.

DEP VAR:    G970        N:       19  MULTIPLE R: 0.454  SQUARED MULTIPLE R: 0.206
ADJUSTED SQUARED MULTIPLE R:  .160     STANDARD ERROR OF ESTIMATE:  0.158966476

VARIABLE       COEFFICIENT     STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        .305799E+02  .132036E+02  0.000000000  .          2.31603  0.03330
YEAR           -0.014000000  0.006658373 -0.454297258  .100E+01 -2.10262  0.05070

                         ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE     F-RATIO        P

REGRESSION      0.111720000     1  0.111720000 4.420993051 0.050702428
RESIDUAL        0.429595789    17  0.025270341
```

G-970

```
WED 3/13/96 17:05:55    C:\SYSTATW5\9338\HYDRODAT.SYS

DEP VAR:    G972        N:       30  MULTIPLE R: 0.001  SQUARED MULTIPLE R: 0.000
ADJUSTED SQUARED MULTIPLE R:  .000     STANDARD ERROR OF ESTIMATE:  0.472672145

VARIABLE       COEFFICIENT     STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        4.704482017  .197165E+02  0.000000000  .          0.23861  0.81315
YEAR            0.000051168  0.009970344  0.000969859  .100E+01  0.00513  0.99594

                         ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE     F-RATIO        P

REGRESSION      0.000005884     1  0.000005884 0.000026338 0.995941652
RESIDUAL        6.255730782    28  0.223418957
```

G-972

Groundwater Elevation vs. Time

WED 3/13/96 17:06:24 C:\SYSTATW5\9338\HYDRODAT.SYS

G-974

```
DEP VAR:    G974      N:      30  MULTIPLE R: 0.854  SQUARED MULTIPLE R: 0.730
ADJUSTED SQUARED MULTIPLE R:  .720    STANDARD ERROR OF ESTIMATE:  0.570563999

VARIABLE       COEFFICIENT    STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        .210569E+03  .237999E+02  0.000000000  .          8.84748  0.00000
YEAR           -0.104598443  0.012035233 -0.854141060  .100E+01 -8.69102  0.00000

                        ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE      F-RATIO        P

REGRESSION      .245895E+02     1  .245895E+02 .755338E+02 0.000000002
RESIDUAL        9.115211761    28  0.325543277
```

WED 3/13/96 17:06:37 C:\SYSTATW5\9338\HYDRODAT.SYS

G-975

```
DEP VAR:    G975      N:      30  MULTIPLE R: 0.644  SQUARED MULTIPLE R: 0.415
ADJUSTED SQUARED MULTIPLE R:  .394    STANDARD ERROR OF ESTIMATE:  0.558820778

VARIABLE       COEFFICIENT    STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        .109454E+03  .233101E+02  0.000000000  .          4.69555  0.00006
YEAR           -0.052502781  0.011787527 -0.643974514  .100E+01 -4.45410  0.00012

                        ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE      F-RATIO        P

REGRESSION      6.195328142     1  6.195328142 .198390E+02 0.000123117
RESIDUAL        8.743858524    28  0.312280662
```

WED 3/13/96 17:06:49 C:\SYSTATW5\9338\HYDRODAT.SYS

G-976

```
DEP VAR:    G976      N:      30  MULTIPLE R: 0.788  SQUARED MULTIPLE R: 0.622
ADJUSTED SQUARED MULTIPLE R:  .608    STANDARD ERROR OF ESTIMATE:  0.663112576

VARIABLE       COEFFICIENT    STD ERROR      STD COEF TOLERANCE     T   P(2 TAIL)

CONSTANT        .192144E+03  .276604E+02  0.000000000  .          6.94653  0.00000
YEAR           -0.094863181  0.013987414 -0.788417038  .100E+01 -6.78204  0.00000

                        ANALYSIS OF VARIANCE

SOURCE        SUM-OF-SQUARES   DF  MEAN-SQUARE      F-RATIO        P

REGRESSION      .202253E+02     1  .202253E+02 .459961E+02 0.000000229
RESIDUAL        .123121E+02    28  0.439718289
```

Well Data vs Time (1963-1980 only)

THU 3/21/96 10:24:37 C:\SYSTATW5\9338\HYDRODAT.SYS
12 CASES DELETED DUE TO MISSING DATA.

G-974

DEP VAR:G974EARL N: 18 MULTIPLE R: 0.661 SQUARED MULTIPLE R: 0.437
ADJUSTED SQUARED MULTIPLE R: .401 STANDARD ERROR OF ESTIMATE: 0.4134697

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	134.8016030	37.0335301	0.0000000	.	3.63999	0.00220
YEAREARL	-0.0661507	0.0187844	-0.6607948	.100E+01	-3.52158	0.00283

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	2.1201290	1	2.1201290	12.4015181	0.0028315
RESIDUAL	2.7353154	16	0.1709572		

THU 3/21/96 10:24:49 C:\SYSTATW5\9338\HYDRODAT.SYS
12 CASES DELETED DUE TO MISSING DATA.

G-975

DEP VAR:G975EARL N: 18 MULTIPLE R: 0.335 SQUARED MULTIPLE R: 0.112
ADJUSTED SQUARED MULTIPLE R: .057 STANDARD ERROR OF ESTIMATE: 0.4893121

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	68.2287960	43.8265532	0.0000000	.	1.55679	0.13908
YEAREARL	-0.0315893	0.0222300	-0.3347585	.100E+01	-1.42102	0.17451

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	0.4834737	1	0.4834737	2.0193009	0.1745072
RESIDUAL	3.8308207	16	0.2394263		

THU 3/21/96 10:25:05 C:\SYSTATW5\9338\HYDRODAT.SYS
12 CASES DELETED DUE TO MISSING DATA.

G-976

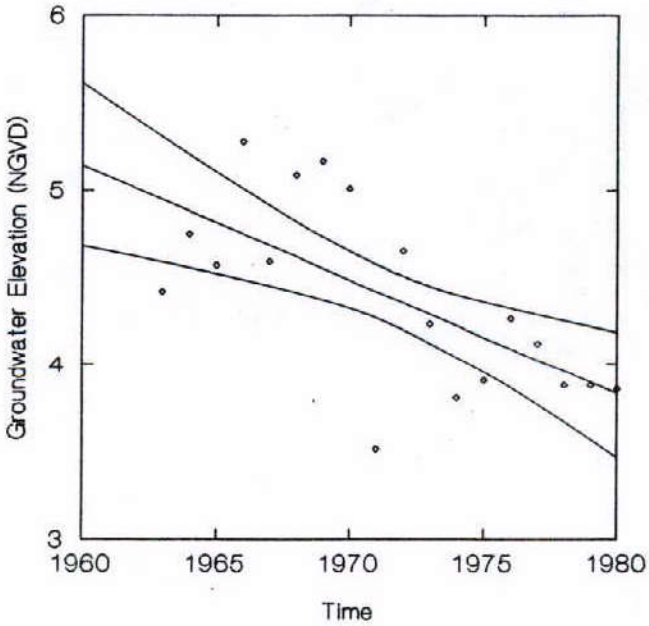
DEP VAR:G976EARL N: 18 MULTIPLE R: 0.467 SQUARED MULTIPLE R: 0.218
ADJUSTED SQUARED MULTIPLE R: .170 STANDARD ERROR OF ESTIMATE: 0.3858318

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	78.2431373	34.5580645	0.0000000	.	2.26411	0.03782
YEAREARL	-0.0370588	0.0175288	-0.4672878	.100E+01	-2.11417	0.05055

ANALYSIS OF VARIANCE

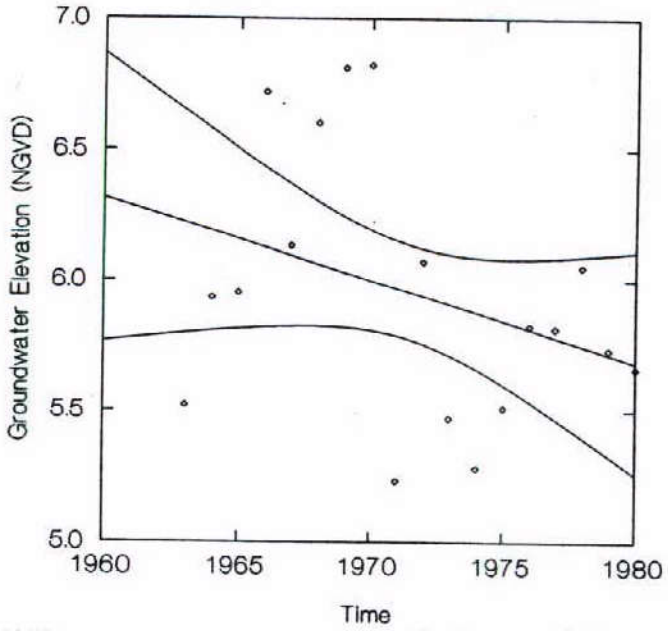
SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	0.6653912	1	0.6653912	4.4697271	0.0505519
RESIDUAL	2.3818588	16	0.1488662		

G-974 Annual Avg Groundwater Elev.

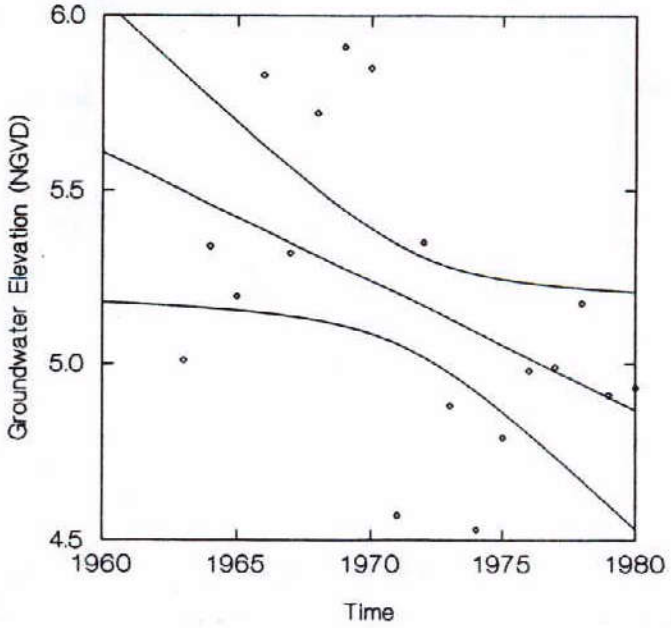


DOC#614

G-975 Annual Avg Groundwater Elev.



G-976 Annual Avg Groundwater Elev.



APPENDIX K

Statistical Analysis: Melaleuca Cover vs. Groundwater Elevation

Correlations Between Well Data and Melaleuca % Cover

THU 3/14/96 14:53:19 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-970 vs Sec.05-52-40

	G970	S5T52R40
G970	1.00	
S5T52R40	-0.64	1.00

BARTLETT CHI-SQUARE STATISTIC: 1.301 DF= 1 PROB= .254

MATRIX OF PROBABILITIES

	G970	S5T52R40
G970	0.00	
S5T52R40	0.25	0.00

NUMBER OF OBSERVATIONS: 5

THU 3/14/96 14:54:36 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-972 vs Sec.22-52-39

	G972	S22T52R3
G972	1.00	
S22T52R3	-0.04	1.00

BARTLETT CHI-SQUARE STATISTIC: .007 DF= 1 PROB= .933

MATRIX OF PROBABILITIES

	G972	S22T52R3
G972	0.00	
S22T52R3	0.93	0.00

NUMBER OF OBSERVATIONS: 8

THU 3/14/96 14:55:22 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-974 vs Sec.12-53-39

	G974	S12T53R3
G974	1.00	
S12T53R3	-0.61	1.00

BARTLETT CHI-SQUARE STATISTIC: 2.512 DF= 1 PROB= .113

MATRIX OF PROBABILITIES

	G974	S12T53R3
G974	0.00	
S12T53R3	0.11	0.00

NUMBER OF OBSERVATIONS: 8

Correlations Between Well Data and Melaleuca % Cover

THU 3/14/96 14:56:29 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-975 vs Sec.30-52-39

	G975	S30T52R3
G975	1.00	
S30T52R3	-0.50	1.00

BARTLETT CHI-SQUARE STATISTIC: 1.569 DF= 1 PROB= .210

MATRIX OF PROBABILITIES

	G975	S30T52R3
G975	0.00	
S30T52R3	0.21	0.00

NUMBER OF OBSERVATIONS: 8

THU 3/14/96 14:59:22 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-976 vs Sec.28-53-39

	G976	S28T53R3
G976	1.00	
S28T53R3	-0.51	1.00

BARTLETT CHI-SQUARE STATISTIC: 1.645 DF= 1 PROB= .200

MATRIX OF PROBABILITIES

	G976	S28T53R3
G976	0.00	
S28T53R3	0.20	0.00

NUMBER OF OBSERVATIONS: 8

THU 3/14/96 14:59:55 C:\SYSTATW5\9338\LBCOVER.SYS

PEARSON CORRELATION MATRIX

G-1488 vs Sec.29-53-39

	G1488	S29T53R3
G1488	1.00	
S29T53R3	-0.18	1.00

BARTLETT CHI-SQUARE STATISTIC: .144 DF= 1 PROB= .705

MATRIX OF PROBABILITIES

	G1488	S29T53R3
G1488	0.00	
S29T53R3	0.70	0.00

NUMBER OF OBSERVATIONS: 7

Correlations Between Well Data and Melaleuca % Cover

TUE 3/19/96 13:02:35 C:\SYSTATW5\9338\LBCOVER.SYS

		YEAR	S5T52R40	S22T52R3	S12T53R3	S30T52R3	S28T53R3	S29T53R3	S29T53R3
CASE	1	1963.00	0.50	0.20	0.50	0.00	0.04	0.00	0.00
CASE	2	1971.00	1.60	.	3.50	.	.	.	.
CASE	3	1972.00	.	2.50	.	0.00	0.23	0.00	0.00
CASE	4	1976.00	4.70	21.60	.	6.70	21.30	0.00	0.00
CASE	5	1977.00	.	.	58.80	.	.	.	.
CASE	6	1979.00	18.00	.	.	.	.	.	.
CASE	7	1980.00	.	35.00	46.70	7.60	23.90	0.00	0.00
CASE	8	1983.00	.	.	78.70	.	.	.	.
CASE	9	1984.00	.	50.80	.	3.70	24.70	0.00	0.00
CASE	10	1985.00	65.70	.	.	.	.	.	.
CASE	11	1986.00	63.20	32.70	92.80	.	17.40	0.00	0.00
CASE	12	1987.00	.	.	.	3.20	.	.	.
CASE	13	1989.00	.	52.00	99.00	.	46.00	0.50	0.50
CASE	14	1990.00	.	.	.	1.50	.	.	.
CASE	15	1992.00	100.00	93.20	100.00	22.10	83.80	59.60	59.60

15 CASES AND 20 VARIABLES PROCESSED.
NO SYSTAT FILE CREATED.

TUE 3/19/96 13:03:05 C:\SYSTATW5\9338\LBCOVER.SYS

		YEAR	G1488	G970	G972	G974	G975	G976
CASE	1	1963.00	.	.	4.62	4.42	5.52	5.01
CASE	2	1971.00	5.74	.	3.85	3.51	5.23	4.57
CASE	3	1972.00	6.46	.	4.79	4.65	6.07	5.35
CASE	4	1976.00	6.22	3.08	4.66	4.26	5.82	4.98
CASE	5	1977.00	6.22	2.91	4.36	4.12	5.81	4.99
CASE	6	1979.00	6.26	2.78	5.14	3.87	5.73	4.91
CASE	7	1980.00	6.23	2.80	5.15	3.85	5.66	4.93
CASE	8	1983.00	6.72	2.87	5.59	4.41	6.28	5.44
CASE	9	1984.00	6.49	2.84	5.41	3.31	5.90	3.99
CASE	10	1985.00	5.47	2.86	4.59	2.45	4.79	2.91
CASE	11	1986.00	6.51	2.85	5.42	2.71	5.94	3.88
CASE	12	1987.00	6.22	2.61	5.32	1.91	5.41	2.94
CASE	13	1989.00	5.39	2.47	4.40	1.28	4.57	2.15
CASE	14	1990.00	4.80	2.61	4.32	1.54	4.21	2.22
CASE	15	1992.00	6.04	2.76	4.59	2.78	4.27	4.12

15 CASES AND 20 VARIABLES PROCESSED.
NO SYSTAT FILE CREATED.