Appendix Part 1. Classification Tables for Logistic Regression Equations for Irrigation

Tables

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Table A1–1. Classification table of probability levels for the logistic-regression equation for estimating the probability of turf-farm irrigation on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut, 2000–04.

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.00	373	0	547	0	40.5	100.0	0.0	59.5	--
0.02	371	45	502	2	45.2	99.5	8.2	57.5	4.3
0.04	364	81	466	9	48.4	97.6	14.8	56.1	10.0
0.06	363	122	425	10	52.7	97.3	22.3	53.9	7.6
0.08	361	143	404	12	54.8	96.8	26.1	52.8	7.7
0.10	354	163	384	19	56.2	94.9	29.8	52.0	10.4
0.12	351	189	358	22	58.7	94.1	34.6	50.5	10.4
0.14	349	216	331	24	61.4	93.6	39.5	48.7	10.0
0.16	348	240	307	25	63.9	93.3	43.9	46.9	9.4
0.18	342	261	286	31	65.5	91.7	47.7	45.5	10.6
0.20	340	286	261	33	68.0	91.2	52.3	43.4	10.3
0.22	333	308	239	40	69.7	89.3	56.3	41.8	11.5
0.24	326	319	228	47	70.1	87.4	58.3	41.2	12.8
0.26	322	342	205	51	72.2	86.3	62.5	38.9	13.0
0.28	321	365	182	52	74.6	86.1	66.7	36.2	12.5
0.30	315	382	165	58	75.8	84.5	69.8	34.4	13.2
0.32	307	394	153	66	76.2	82.3	72.0	33.3	14.3
0.34	302	406	141	71	77.0	81.0	74.2	31.8	14.9
0.36	300	412	135	73	77.4	80.4	75.3	31.0	15.1
0.38	294	421	126	79	77.7	78.8	77.0	30.0	15.8
0.40	289	427	120	84	77.8	77.5	78.1	29.3	16.4
0.42	288	440	107	85	79.1	77.2	80.4	27.1	16.2
0.44	283	453	94	90	80.0	75.9	82.8	24.9	16.6
0.46	279	462	85	94	80.5	74.8	84.5	23.4	16.9
0.48	278	466	81	95	80.9	74.5	85.2	22.6	16.9
0.50	273	470	77	100	80.8	73.2	85.9	22.0	17.5
0.52	264	474	73	109	80.2	70.8	86.7	21.7	18.7
0.54	258	482	65	115	80.4	69.2	88.1	20.1	19.3
0.56	249	490	57	124	80.3	66.8	89.6	18.6	20.2
0.58	239	493	54	134	79.6	64.1	90.1	18.4	21.4
0.60	231	495	52	142	78.9	61.9	90.5	18.4	22.3
0.62	224	503	44	149	79.0	60.1	92.0	16.4	22.9
0.64	213	506	41	160	78.2	57.1	92.5	16.1	24.0
0.66	206	513	34	167	78.2	55.2	93.8	14.2	24.6
0.68	199	515	32	174	77.6	53.4	94.1	13.9	25.3

Table A1–1. Classification table of probability levels for the logistic-regression equation for estimating the probability of turf-farm irrigation on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut, 2000–04. —Continued

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.70	189	520	27	184	77.1	50.7	95.1	12.5	26.1
0.72	182	526	21	191	77.0	48.8	96.2	10.3	26.6
0.74	174	531	16	199	76.6	46.6	97.1	8.4	27.3
0.76	163	534	13	210	75.8	43.7	97.6	7.4	28.2
0.78	154	536	11	219	75.0	41.3	98.0	6.7	29.0
0.80	145	537	10	228	74.1	38.9	98.2	6.5	29.8
0.82	126	538	9	247	72.2	33.8	98.4	6.7	31.5
0.84	111	538	9	262	70.5	29.8	98.4	7.5	32.8
0.86	95	542	5	278	69.2	25.5	99.1	5.0	33.9
0.88	83	545	2	290	68.3	22.3	99.6	2.4	34.7
0.90	68	547	0	305	66.8	18.2	100.0	0.0	35.8
0.92	55	547	0	318	65.4	14.7	100.0	0.0	36.8
0.94	41	547	0	332	63.9	11.0	100.0	0.0	37.8
0.96	15	547	0	358	61.1	4.0	100.0	0.0	39.6
0.98	2	547	0	371	59.7	0.5	100.0	0.0	40.4
1.00	0	547	0	373	59.5	0.0	100.0	0.0	40.5

Table A1–2. Classification table of probability levels for the logistic-regression equation for estimating the probability of golf-course irrigation with surface-water withdrawals on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut, 2000–04.

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.00	374	0	701	0	34.8	100.0	0.0	65.2	--
0.02	369	98	603	5	43.4	98.7	14.0	62.0	4.9
0.04	366	159	542	8	48.8	97.9	22.7	59.7	4.8
0.06	363	204	497	11	52.7	97.1	29.1	57.8	5.1
0.08	363	238	463	11	55.9	97.1	34.0	56.1	4.4
0.10	361	269	432	13	58.6	96.5	38.4	54.5	4.6
0.12	359	297	404	15	61.0	96.0	42.4	52.9	4.8
0.14	357	332	369	17	64.1	95.5	47.4	50.8	4.9
0.16	354	366	335	20	67.0	94.7	52.2	48.6	5.2
0.18	350	389	312	24	68.7	93.6	55.5	47.1	5.8
0.20	349	418	283	25	71.3	93.3	59.6	44.8	5.6
0.22	343	442	259	31	73.0	91.7	63.1	43.0	6.6
0.24	337	461	240	37	74.2	90.1	65.8	41.6	7.4
0.26	327	482	219	47	75.3	87.4	68.8	40.1	8.9
0.28	319	506	195	55	76.7	85.3	72.2	37.9	9.8
0.30	307	515	186	67	76.5	82.1	73.5	37.7	11.5
0.32	305	529	172	69	77.6	81.6	75.5	36.1	11.5
0.34	297	544	157	77	78.2	79.4	77.6	34.6	12.4
0.36	294	555	146	80	79.0	78.6	79.2	33.2	12.6
0.38	284	566	135	90	79.1	75.9	80.7	32.2	13.7
0.40	280	572	129	94	79.3	74.9	81.6	31.5	14.1
0.42	265	580	121	109	78.6	70.9	82.7	31.3	15.8
0.44	260	588	113	114	78.9	69.5	83.9	30.3	16.2
0.46	252	592	109	122	78.5	67.4	84.5	30.2	17.1
0.48	244	598	103	130	78.3	65.2	85.3	29.7	17.9
0.50	240	600	101	134	78.1	64.2	85.6	29.6	18.3
0.52	232	608	93	142	78.1	62.0	86.7	28.6	18.9
0.54	225	614	87	149	78.0	60.2	87.6	27.9	19.5
0.56	220	619	82	154	78.0	58.8	88.3	27.2	19.9
0.58	211	626	75	163	77.9	56.4	89.3	26.2	20.7
0.60	204	630	71	170	77.6	54.5	89.9	25.8	21.3
0.62	192	639	62	182	77.3	51.3	91.2	24.4	22.2
0.64	178	648	53	196	76.8	47.6	92.4	22.9	23.2
0.66	169	652	49	205	76.4	45.2	93.0	22.5	23.9
0.68	160	657	44	214	76.0	42.8	93.7	21.6	24.6

Table A1–2. Classification table of probability levels for the logistic-regression equation for estimating the probability of golf-course irrigation with surface-water withdrawals on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut, 2000–04.—Continued

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.70	149	665	36	225	75.7	39.8	94.9	19.5	25.3
0.72	143	670	31	231	75.6	38.2	95.6	17.8	25.6
0.74	134	673	28	240	75.1	35.8	96.0	17.3	26.3
0.76	116	678	23	258	73.9	31.0	96.7	16.5	27.6
0.78	102	684	17	272	73.1	27.3	97.6	14.3	28.5
0.80	91	689	12	283	72.6	24.3	98.3	11.7	29.1
0.82	75	692	9	299	71.3	20.1	98.7	10.7	30.2
0.84	68	694	7	306	70.9	18.2	99.0	9.3	30.6
0.86	57	699	2	317	70.3	15.2	99.7	3.4	31.2
0.88	47	701	0	327	69.6	12.6	100.0	0.0	31.8
0.90	30	701	0	344	68.0	8.0	100.0	0.0	32.9
0.92	16	701	0	358	66.7	4.3	100.0	0.0	33.8
0.94	5	701	0	369	65.7	1.3	100.0	0.0	34.5
0.96	2	701	0	372	65.4	0.5	100.0	0.0	34.7
0.98	0	701	0	374	65.2	0.0	100.0	0.0	34.8

Table A1–3. Classification table of probability levels for the logistic-regression equation for estimating the probability of golf-course irrigation with groundwater withdrawals on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut.

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.10	472	0	96	0	83.1	100.0	0.0	16.9	--
0.12	471	1	95	1	83.1	99.8	1.0	16.8	50.0
0.14	471	4	92	1	83.6	99.8	4.2	16.3	20.0
0.16	471	5	91	1	83.8	99.8	5.2	16.2	16.7
0.18	471	5	91	1	83.8	99.8	5.2	16.2	16.7
0.20	471	5	91	1	83.8	99.8	5.2	16.2	16.7
0.24	471	7	89	1	84.2	99.8	7.3	15.9	12.5
0.26	471	9	87	1	84.5	99.8	9.4	15.6	10.0
0.28	471	9	87	1	84.5	99.8	9.4	15.6	10.0
0.30	470	9	87	2	84.3	99.6	9.4	15.6	18.2
0.32	470	13	83	2	85.0	99.6	13.5	15.0	13.3
0.34	468	17	79	4	85.4	99.2	17.7	14.4	19.0
0.36	468	22	74	4	86.3	99.2	22.9	13.7	15.4
0.38	463	25	71	9	85.9	98.1	26.0	13.3	26.5
0.40	463	27	69	9	86.3	98.1	28.1	13.0	25.0
0.42	462	27	69	10	86.1	97.9	28.1	13.0	27.0
0.44	458	29	67	14	85.7	97.0	30.2	12.8	32.6
0.46	456	32	64	16	85.9	96.6	33.3	12.3	33.3
0.48	455	38	58	17	86.8	96.4	39.6	11.3	30.9
0.50	451	43	53	21	87.0	95.6	44.8	10.5	32.8
0.52	448	46	50	24	87.0	94.9	47.9	10.0	34.3
0.54	441	50	46	31	86.4	93.4	52.1	9.4	38.3
0.56	437	53	43	35	86.3	92.6	55.2	9.0	39.8
0.58	431	56	40	41	85.7	91.3	58.3	8.5	42.3
0.60	421	58	38	51	84.3	89.2	60.4	8.3	46.8
0.62	417	60	36	55	84.0	88.3	62.5	7.9	47.8
0.64	410	64	32	62	83.5	86.9	66.7	7.2	49.2
0.66	407	68	28	65	83.6	86.2	70.8	6.4	48.9
0.68	404	71	25	68	83.6	85.6	74.0	5.8	48.9
0.70	402	74	22	70	83.8	85.2	77.1	5.2	48.6
0.72	400	74	22	72	83.5	84.7	77.1	5.2	49.3
0.74	399	75	21	73	83.5	84.5	78.1	5.0	49.3
0.76	396	75	21	76	82.9	83.9	78.1	5.0	50.3
0.78	389	76	20	83	81.9	82.4	79.2	4.9	52.2
0.80	378	76	20	94	79.9	80.1	79.2	5.0	55.3

Table A1–3. Classification table of probability levels for the logistic-regression equation for estimating the probability of golf-course irrigation with groundwater withdrawals on a specific day in the Pawcatuck River Basin, southwestern Rhode Island and southeastern Connecticut.—Continued

[Correct: The frequency with which days of irrigation are correctly classified. Incorrect: The frequency with which days of irrigation are incorrectly classified. Event: A day of irrigation. Nonevent: A day of no irrigation. Percentages: Correct: The probability that the equation correctly classifies the sample data for each probability cutpoint. Sensitivity: The ratio of correctly classified events to the total number of events. Specificity: The ratio of correctly classified nonevents to the total number of nonevents. False positive: The ratio of the number of nonevents incorrectly classified as events to the sum of all observations classified as events. False negative: The ratio of the number of events incorrectly classified as nonevents to the sum of all observations classified as nonevents. SAS Institute, Inc., 1995, p. 45–50. Note: Shaded row highlights the cutpoint probability chosen for this equation and the associated classification table information as discussed in Part 1 of this report. --, not applicable]

Probability level (cutpoint)	Correct		Incorrect		Percentages				
	Event	Nonevent	Event	Nonevent	Correct	Sensitivity	Specificity	False positive	False negative
0.82	370	77	19	102	78.7	78.4	80.2	4.9	57.0
0.84	367	78	18	105	78.3	77.8	81.3	4.7	57.4
0.86	358	82	14	114	77.5	75.8	85.4	3.8	58.2
0.88	343	84	12	129	75.2	72.7	87.5	3.4	60.6
0.90	326	85	11	146	72.4	69.1	88.5	3.3	63.2
0.92	304	89	7	168	69.2	64.4	92.7	2.3	65.4
0.94	279	90	6	193	65.0	59.1	93.8	2.1	68.2
0.96	247	92	4	225	59.7	52.3	95.8	1.6	71.0
0.98	187	94	2	285	49.5	39.6	97.9	1.1	75.2
1.00	0	96	0	472	16.9	0.0	100.0	--	83.1

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