Abigail Taylor Pool Safety Act

Report to the Minnesota Legislature

January 15, 2009

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Abigail Taylor Swimming Pool Safety Act -

Report to the Legislature

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AUTHORITY:

This report is in response to a request from the 2008 Legislature to provide information in regard to the Abigail Taylor Pool Safety Act.

Report. By January 15, 2009, the commissioner of health shall report to the chairs and ranking minority members of the legislative committees and divisions having jurisdiction over the regulation of public pools and spas: the number of public pools and spas under license in the state of Minnesota, the type of ownership of public pools under license in the state, the type of drains at all licensed public pools and spas as reported by owners or licensees, and the number of pools and spas that required drain modification due to this act. This report shall include the estimated economic impact and costs of the installation of a second main drain and cover. Laws of Minnesota 2008 Chapter 328

BACKGROUND

On June 29, 2007, Abigail Taylor suffered serious injuries at the Minneapolis Golf Club (MGC) pool in St. Louis Park that eventually led to her death. The six-year old was injured when she sat on an open drain in the wading pool; the heavy suction at the drain caused her intestinal tract to be partially removed. In its investigation of the June 2007 MGC incident, the Minnesota Department of Health (MDH) learned that:

- The wading pool and equipment were not maintained in a proper operating condition. The cover of the main drain of the pool was not securely attached to the mounting frame and became detached prior to the injury. The main drain cover had been attached with improper fasteners and a worn mounting ring.
- The pool water was cloudy so that the bottom of the pool, including the drain, was not visible, as reported by witnesses. Cloudy water can be evidence of improper operation of the circulation system of the pool.
- A second suction line may have been blocked, shut off or compromised. This could have caused excessive suction at the main drain.
- MGC staff was not adequately trained to respond to unsafe conditions at the pool.

In response to this incident, a new law regulating the installation of anti-entrapment drain covers and other systems to ensure children or others cannot become trapped by pool drains was passed by the Minnesota Legislature and signed into law by the Governor Tim Pawlenty on May 16, 2008. Several important dates were designated in this legislation, including:

- July 1, 2008, owners/operators were to certify to the Commissioner that:
 - all outlets except for unblockable drains are equipped with covers that have been stamped by the manufacturer that they are in compliance with ASME/ANSI standards; and
 - (2) all covers and grates, including mounting rings, have been inspected to ensure that they have been properly installed and are not broken or loose.
- January 1, 2009, all pools four feet deep or less must have dual main drains connected in parallel or other protections to avoid entrapment injuries.
- January 1, 2011, all pools deeper than four feet must have dual main drains connected in parallel or other protections to avoid entrapment injuries.

A separate federal law, the Virginia Graeme Baker Pool and Spa Safety Act, requires similar

safety enhancements and went into effect December 19, 2008. The federal law applies to all pools across the country.

DATA GATHERING

Public swimming pools in Minnesota are licensed and inspected by Minnesota Department of Health (MDH) and 41 local public health agencies that operate under a delegation agreement with MDH. Delegation to local public health agencies is authorized in MN Statutes Chapter 145A.07.

MDH notified public pool owners/operators of the new requirements by:

- Issuing several press releases (April 9, 2008; June 23, 2008; and December 23, 2008).
- Updating the MDH website with pertinent information and links (http://www.health.state.mn.us/divs/eh/pools/index.html).
- Holding meetings for pool industry professionals, multi-family housing association members, and local delegated agencies.
- Sending letters to currently licensed public pool operators.
- In addition, MDH and some local jurisdictions contacted their licensed pools through various means including phone calls, letters, and personal visits.

The legislative report requirement asked for information that is not readily available in one dataset, (i.e., type of ownership of public pools, types of drains at public pools, number of pools requiring modification due to the act, and economic impact of modifying said drains, etc). MDH developed an on-line survey to be used by owners/operators for the purposes of certifying to the Commissioner and collecting the necessary information. The on-line survey was operational by mid-June 2008.

In addition to the online survey, information from owners/operators was obtained by:

- Distribution of the survey to public pool owners/operators who did not have access to the internet, or preferred to complete the survey on paper.
- Visits from some local health agencies to public pools under their licensure to assist the owner/operator in completing the survey.
- Collection of these data by some local agencies, and provision of the data to MDH using data spreadsheets.

Accuracy and Completeness of Data

The accuracy of the survey data was hindered by numerous factors:

- MDH does not have a master list of all public pools licensed in the state, at this time.
- Not all public pools were licensed prior to the Abigail Taylor Pool Safety Act.
- Not all owners/operators knew about the new law; multiple efforts to notify them, including extensive media coverage, were conducted.
- Some of the data received from pool owners was incompatible with the survey format provided by MDH.
- The completeness and accuracy of the data was affected by the short time frame from passage of the Act to the July 1 deadline for completion of the survey.
- In some cases, owners/operators provided incorrect information regarding which agency licensed their pool. Therefore, timely follow up from the appropriate licensing jurisdiction was not always possible.
- Some owners/operators found the online survey to be difficult to navigate and did not

provide complete information.

• Owners/operators didn't understand what some questions meant (i.e., "type of drain" answer: "12 x 12 grate" rather than "single drain with direct suction" or "dual drains, but one is blocked").

SURVEY RESULTS

1. Licensed pools

As of this report, there are 3,439 public pools licensed in the state of Minnesota. After the Abigail Taylor Pool Safety Act was passed in May 2008, 308 pools that were previously not required to be licensed, became licensed, mostly associated with apartment buildings and fitness centers. The online survey was completed by 2633 public pool owners/operators. **(see TABLE 1.)**

2. Ownership and types of pools

Owners/operators were asked to classify the ownership of their pools on the pool survey. In some cases, owners/operators picked more than one type of ownership to describe their facilities. Type of ownership of public pools as reported in the pool survey (see TABLE 2, GRAPH 1 and GRAPH 2.):

- Hotel, motel, resort, timeshare, or lodging facility = 941 pools
- Apartment, condo, townhouse, homeowner's association, or other multi-family housing = 832 pools
- Government = 301 pools (parks, recreation centers, etc.)
- Fitness center, health club, YMCA/YWCA, waterpark, or similar = 287 pools
- School = 208 pools
- Recreational camping area = 90 pools
- Hospital, clinic, therapy center, or nursing home = 30 pools
- Mobile home park = 27 pools
- Youth camp = 13 pools
- Licensed child care = 4 pools

3. Types of drains:

Using the pool survey, owners/operators were asked to describe the types of drains in their pools:

- Dual drains, connected in parallel = 1518 pools
- Single drain with direct suction = 1379 pools
- Unblockable drain = 555 pools
- Gravity systems = 332 pools
- Other = 265 pools

4. Pools requiring modification

Owners/operators identified 1401 public pools that needed modification to meet the provisions in the act. (TABLE 3, GRAPH 3 and GRAPH 4.)

5. Estimated cost to modify pools to meet the requirements of the Act

Median cost reported by owners/operators = \$5,000 (range, \$5 to \$200,000).

NOTE: Many owners/operators did not provide an answer to this question, or indicated that the numbers they provided were only preliminary. (Surveys were completed in July before many owners/operators had received bids for the work that needed to be completed. In addition, since the Act was passed, several new and less

expensive alternatives have been developed for drain modification and will significantly reduce the median cost of modifying the pools.)

CONCLUSIONS

MDH is aware of some pool closures due to requirements of the Federal and State pool safety laws. An unknown number of owners/operators have chosen to close their pools permanently rather than make required modifications. Many owners/operators of shallow pools have temporarily closed their pools until necessary modifications can be made.

The requirements have also affected both pool contractors and suppliers. In some cases, the demand for new drain covers and drain modifications have exceeded the industry's capacity to respond in a timely manner. For example, in 2008 there were 172 plans submitted for pool alterations, compared to 2007 when 34 plans were submitted for pool alterations.

Response actions by pool owners/operators are ongoing and MDH anticipates needing the remainder of 2009 to fully assess the impact of this legislation.

Government actions continue to be taken due to Act:

- License applications for public pools have been modified to address the annual certification of drain and daily inspection requirements to the commissioner. Annually, MDH will evaluate compliance with the requirements and initiate regulatory responses, when appropriate.
- Licensing agencies (MDH and local public agencies) will continue to follow up with owners/operators to ensure that applicable standards for pools are being met.
- MDH will continue to analyze the survey data to identify methods of further improving pool safety in Minnesota.

The Legislation provided MDH with the opportunity to gather pool data not otherwise available, and allowed for increased awareness of pool safety issues for owners/operators, contractors, local units of government, and environmental health staff. A need remains for ongoing training for Certified Trained Pool Operators and governmental environmental health staff.

Due to the passage of the Abigail Taylor Pool Safety Act and the Virginia Graeme Baker Pool and Spa Safety Act, the industry has been rapidly changing pool drain designs and creating new designs to make pools safer. Improvements in the construction and safety of public pools will continue in the future because of implementation of these new laws.

1.	Summary Data for All Pools Completing the Pool Total number of pools currently licensed in Minnesota (as reported by the licensing jurisdiction) (TABLE 1.)	ol Survey (Page 1 of 2) 3439
2.	Number of previously unlicensed pools which were licensed in 2008 as a result of the Abigail Taylor Pool Safety Act, as reported by the licensing jurisdiction (e.g., apartment pools, fitness clubs, etc) (TABLE 1.)	215
3.	Number of pools completing the survey which requested pool and drain information (TABLE 1.)	2633
4.	Type of Ownership of Pools: (as reported by owners/operators who complete	eted the pool survey) (GRAPH 1.)
	 Apartment, condo, townhouse, homeowner's association, or other multi-family housing 	832
	b. Hotel, motel, resort, timeshare, or lodging facility	941
	 Fitness center, health club, YMCA/YWCA, waterpark, or similar 	287
	d. Mobile home park	27
	e. Recreational camping area	90
	f. Youth camp	13
	g. Government (i.e., city, county, township, state)	301
	h. School	208
	i. Hospital, clinic, therapy center, or nursing home	30
	 Licensed child care or daycare facility (this does not 	
	include pools at family daycare homes licensed under MN Statutes 245A.14	4
5.	Type of public pools licensed in Minnesota (as reported by owners/operate	ors who completed the pool survey)

(GRAPH 2.)

GRAFH 2.)	
a. Wading	272
b. Swimming	1508
c. Lap pool	153
d. Spa/hot tub	728
e. Plunge/slide	75
f. Lazy river	12
g. Spray Deck or splash pad	13
h. Swim pond	6
i. Therapy pool	48
j. Wave pool	1
k. Zero depth entry	86

6. Types of drains in public pools (as reported by owners/operators who completed the pool survey)

a. Unblockable drain	555
b. Single drain with direct suction	1379
c. Dual drains, connected in parallel	1518
d. Gravity System	332
e. Other	265

7. Pool depth (as reported by owners/operators who completed the pool survey) (GRAPH 2.)

	-	-	
a. Less than four feet			1091
b. Greater than four feet			1541

Summary Data for All Pools Completing the Pool Survey (Page 2 of 2)

- 8. Number of pools requiring drain modification, as reported by owners/operators who completed the pool survey (TABLE 3.) 1401
- Estimated cost to modify the pool to meet the requirements of the Abigail Taylor Pool Safety Act (as reported by owners/operators who completed the pool survey)

Median = \$5000 (range, \$5 to \$200,000)

Pools Requiring Modification to Meet the Abigail Taylor Pool Safety Act: Summary Data (N = 1401)

- 1. Number of pools requiring drain modification to meet the Act (as reported by owners/operators who completed the pool survey) (TABLE 3.)
- 2. Type of Ownership of Pools: (as reported by owners/operators who completed the pool survey) (TABLE 3 & GRAPH 3)

 Apartment, condo, townhouse, homeowner's association, or other multi-family housing 	564
b. Hotel, motel, resort, timeshare, or lodging facility	531
c. Fitness center, health club, YMCA/YWCA, waterpark, or	102
d. Mobile home park	21
e. Recreational camping area	42
f. Youth camp	5
g. Government (i.e., city, county, township, state)	100
h. School	55
i. Hospital, clinic, therapy center, or nursing home	12
j. Licensed child care or daycare facility (this does not	
include pools at family daycare homes licensed under	4
MN Statutes 245A.14	

3. Type of public pools licensed in Minnesota (as reported by owners/operators who completed the pool survey) (GRAPH 4.)

a. Wading	121
b. Swimming	853
c. Lap pool	36
d. Spa/hot tub	394
e. Plunge/slide	13
f. Lazy river	2
g. Spray Deck or splash pad	2
h. Swim pond	3
i. Therapy pool	21
j. Wave pool	0
k. Zero depth entry	11

4. Pool depth (as reported by owners/operators who completed the pool survey) a. Less than four feet 542

b. Greater than four feet 859)

 Estimated cost to modify the pool to meet the requirements of the Abigail Taylor Pool Safety Act (as reported by owners/operators who completed the pool survey)

Median = \$5000 (range, \$5 to \$200,000)

TABLE 1. Public Pools Licensed in Minnesota, by Agency, 2008 (Page 1 of 2)

Agency	Total number of pools licensed (as reported by the delegated agency)	Number of pools newly licensed as a result of the Abigail Taylor Pool Safety Act (as reported by the delegated agency)	Completed pool surveys in the online system **	Percent of licensed pools completing the online survey ***	
Aitkin	13	0	14	108%	
Anoka	96	0	104	108%	
Bloomington/Richfield	206	0	44	21%	
Brown-Nicollet-Cottonwood- Watonwan	43	0	47	109%	
Brooklyn Park	53	0	53	100%	
Clay-Wilkin	9	6	5	56%	
Countryside	34	10	33	97%	
Crystal	12	0	13	108%	
Douglas-Pope	38	0	39	103%	
Edina	88	0	79	90%	
Faribault-Martin	23	15	23	100%	
Goodhue	43	0	4	9%	
Hennepin	350	2	63	18%	
Hopkins	26	0	23	88%	
Kandiyohi	23	4	25	109%	
Lake	26	0	26	100%	
LeSueur-Waseca	25	7	24	96%	
Lincoln-Lyon-Murray-Pipestone	8	5	12	150%	
Maplewood	21	0	20	95%	
MDH	1004	233	1111	111%	
Moorhead	17	0	25	147%	
Morrison-Todd	22	0	20	91%	
Minneapolis	203	0	140	69%	
Minnetonka	76	0	50	66%	
Nobles-Rock	17	8	17	100%	

TABLE 1. Public Pools Licensed in Minnesota, by Agency, 2008 (Page 2 of 2)

Agency	Total number of pools licensed (as reported by the delegated agency)	Number of pools newly licensed as a result of the Abigail Taylor Pool Safety Act (as reported by the delegated agency)	Completed pool surveys in the online system **	Percent of licensed pools completing the online survey ***	
Olmsted	121	0	36	30%	
Ramsey	184	0	181	98%	
Redwood-Renville	17	0	15	88%	
St Cloud	88	0	57	65%	
St Louis County	113	0	75	66%	
St Louis Park	79	0	37	47%	
St Paul	119	0	78	66%	
Stearns	49	18	32	65%	
University of MN	15	0	15	100%	
Wabasha	9	0	3	33%	
Wadena	9	0	9	100%	
Washington	127	0	49	39%	
Wayzata	7	0	5	71%	
Winona	26	0	27	104%	
TOTALS	3439	308	2633	77%	

** Several agencies chose to submit data to MDH on a spreadsheet. Due to inaccuracies or format changes in the spreadsheet, the data could not be imported. Each of these agencies was given an opportunity to correct the spreadsheet or enter the data directly into the online survey.

*** Percentages may appear greater than 100% because pool owners/operators were asked to assign the licensing jurisdiction - if the delegated agencies did not correct the mis-assigned pools in their jurisdictions, these numbers are inaccurate because not all of the pools assigned to this jurisdiction actually belong in this jurisdiction.

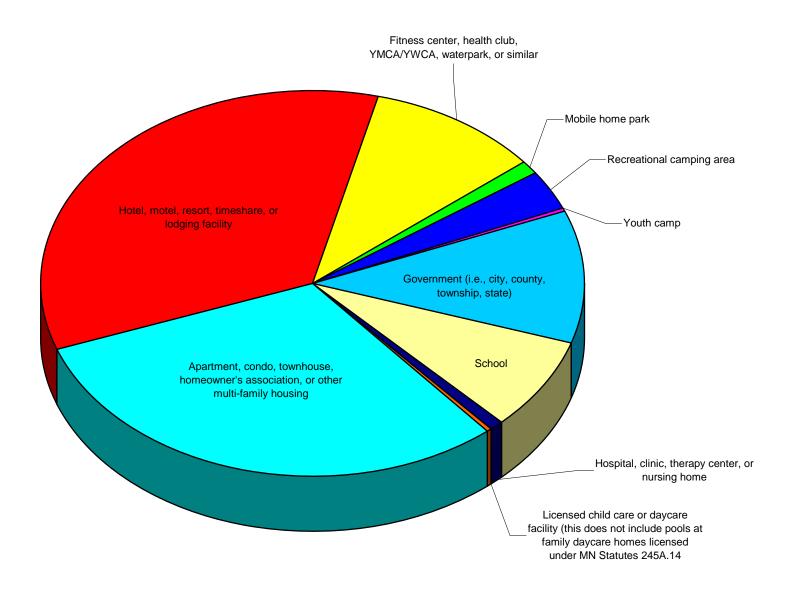
Type of Public Pools Pool Depth Spray Deck Agency Plunge or Lazy Swim Therapy Zero Depth Greater than Lap Less than or Spa/hot tub Swimming or Splash Wave Wading Pool slide River Pond Pool Entry equal to 4 feet 4 feet Pad Aitkin Anoka Bloomington/Richfield Brown-Nicollet-Cottonwood Watonwan **Brooklyn Park** Clay-Wilkin Countryside Crystal Douglas-Pope Edina Faribault-Martin Goodhue Hennepin Hopkins Kandiyohi Lake LeSueur-Waseca Lincoln-Lyon-Murray-Pipestone Maplewood MDH Moorhead

TABLE 2. Public Pool Type and Depth, by Agency (Page 1 of 2)

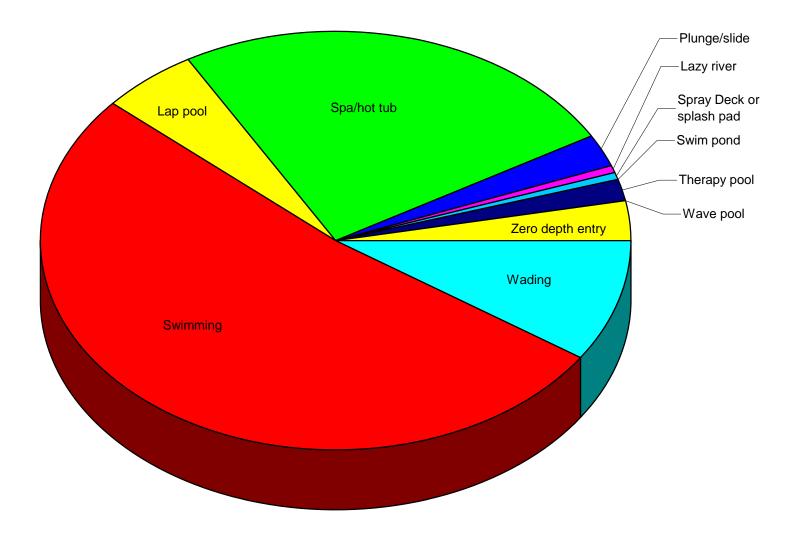
	Type of Public Pools										Pool I	Depth	
Agency	Wading	Swimming	Lap Pool	Spa/hot tub	Plunge or slide	Lazy River	Spray Deck or Splash Pad	Swim Pond	Therapy Pool	Wave	Zero Depth Entry	Less than or equal to 4 feet	Greater than 4 feet
Minneapolis	33	49	7	44	3	0	1	0	3	0	4	87	53
Minnetonka	0	28	2	18	0	0	0	0	2	0	0	18	32
Nobles-Rock	3	9	3	5	2	0	0	0	3	0	0	9	8
Olmsted	5	20	1	10	0	0	0	0	1	0	0	17	19
Ramsey	7	127	6	39	4	0	0	0	2	0	1	51	130
Redwood-Renville	6	8	1	1	0	0	0	0	0	0	0	9	6
St Cloud	11	29	0	15	0	0	3	0	0	0	4	30	27
St Louis County	4	41	3	26	1	0	0	0	2	0	0	35	40
St Louis Park	0	26	2	9	0	0	0	0	1	0	1	10	27
St Paul	4	48	7	22	1	0	0	0	2	0	3	26	52
Stearns	3	20	0	9	0	0	0	0	0	0	0	12	20
University of MN	1	5	6	2	1	0	0	0	5	0	1	4	11
Wabasha	1	2	0	0	0	0	0	0	0	0	0	1	2
Wadena	2	4	1	2	0	0	0	0	0	0	1	4	5
Washington	4	32	6	11	0	0	0	0	2	0	2	18	31
Wayzata	1	4	1	0	0	0	0	0	0	0	0	1	4
Winona	1	19	5	6	2	0	0	0	1	0	3	8	19
TOTALS	270	1496	152	723	75	12	13	6	48	1	86	1084	1528

TABLE 2. Public Pool Type and Depth, by Agency (Page 2 of 2)

GRAPH 1. Type of Ownership of Public Pools, as reported by owners/operators who completed the pool survey, (N = 2633)



GRAPH 2. Type of Public Pools , as reported by owners/operators who completed the pool survey, (N = 2633)



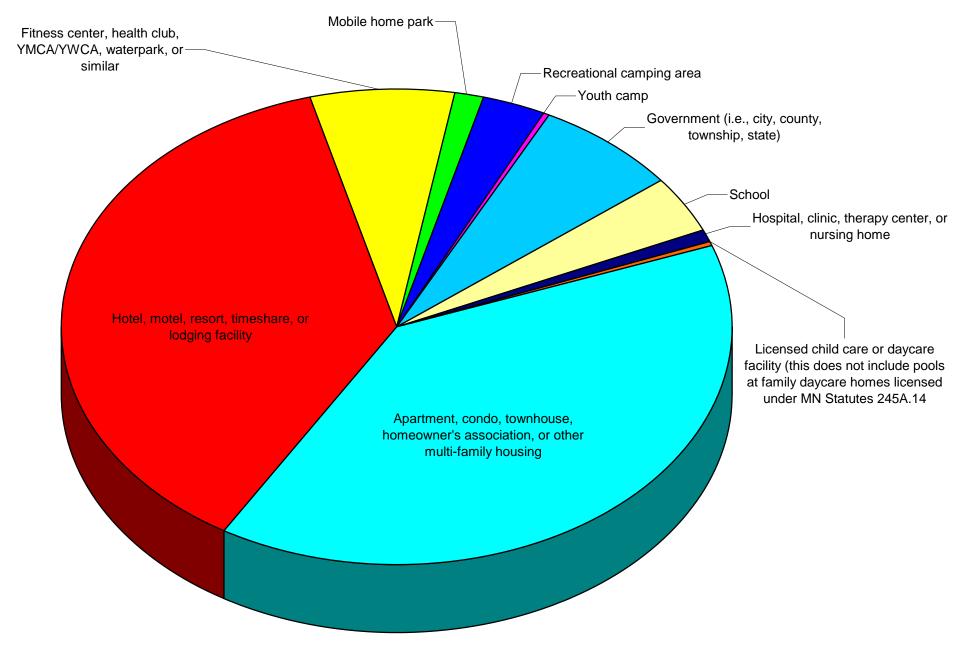
	Type of Ownership of Public Pools										
Agency	Apt, condo, HOA, etc	Hotel, resort, lodging, etc	Health club, waterpark, etc	Mobile home park	Recreational camping area	Youth camp	Gov't (city, county, etc)	School	Hospital, clinic, therapy center, etc	Licensed child care	Pools Requiring Drain Modification Due to the Act
Aitkin	4	5	0	0	5	0	0	0	0	0	7
Anoka	43	25	24	0	0	0	7	9	0	0	49
Bloomington/Richfield	37	5	0	0	0	0	2	0	0	0	32
Brown-Nicollet-Cottonwood- Watonwan	0	17	4	0	0	0	23	5	3	0	20
Brooklyn Park	36	12	4	0	0	0	0	1	0	0	36
Clay-Wilkin	0	0	0	0	0	0	3	2	0	0	3
Countryside	1	8	4	0	2	0	16	4	0	0	11
Crystal	11	0	0	0	0	0	2	0	0	0	6
Douglas-Pope	7	26	0	0	4	0	0	2	2	0	25
Edina	58	2	12	0	0	0	4	3	0	0	54
Faribault-Martin	0	9	0	0	0	0	13	1	0	0	15
Goodhue	0	4	0	0	0	0	0	0	0	0	4
Hennepin	40	10	11	0	0	0	0	2	0	0	35
Hopkins	17	0	5	0	0	0	0	1	0	0	12
Kandiyohi	1	13	4	0	2	0	2	5	0	0	11
Lake	3	21	2	0	0	0	0	2	0	0	16
LeSueur-Waseca	0	7	6	0	8	0	7	1	0	0	15
Lincoln-Lyon-Murray- Pipestone	0	0	3	0	1	0	10	1	0	0	5
Maplewood	11	2	3	0	0	0	5	2	0	0	11
MDH	225	532	98	22	54	12	96	107	15	0	563

TABLE 3. Public Pools Requiring Modification to Meet the Act: Type of Ownership, by Agency, (Page 1 of 2)

TABLE 3. Public Pools Requiring Modification to Meet the Act: Type of Ownership, by Agency, (Page 1 of 2)

Agency	Type of Ownership of Public Pools										Number of Public Pools Requiring
	Apt, condo, HOA, etc	Hotel, resort, lodging, etc	Health club, waterpark, etc	Mobile home park	Recreational camping area	Youth camp	Gov't (city, county, etc)	School	Hospital, clinic, therapy center, etc	Licensed child care	Drain Modification Due to the Act
Moorhead	1	10	0	0	1	0	9	4	0	0	15
Morrison-Todd	2	10	2	0	2	0	1	3	0	0	12
Minneapolis	54	26	24	0	0	0	35	4	4	0	56
Minnetonka	37	4	8	0	0	0	0	1	0	0	35
Nobles-Rock	0	9	1	0	0	0	7	0	0	0	10
Olmsted	9	14	5	2	2	1	2	2	0	0	26
Ramsey	114	29	22	1	0	0	4	7	4	3	121
Redwood-Renville	0	1	0	0	0	0	12	3	0	0	8
St Cloud	19	26	2	0	0	0	10	0	0	0	27
St Louis County	4	52	5	0	4	0	0	14	1	1	42
St Louis Park	29	5	2	0	0	0	1	0	0	0	20
St Paul	45	10	15	0	0	0	2	5	1	0	38
Stearns	5	13	4	1	3	0	2	4	0	0	19
University of MN	0	0	3	0	0	0	15	0	0	0	1
Wabasha	0	1	0	0	0	0	2	0	0	0	1
Wadena	0	4	1	0	0	0	4	0	0	0	4
Washington	13	18	9	1	1	0	2	6	0	0	18
Wayzata	2	2	0	0	0	0	0	1	0	0	2
Winona	4	9	4	0	1	0	3	6	0	0	16
	· · ·				<u> </u>				~		
TOTALS	832	941	287	27	90	13	301	208	30	4	1401

GRAPH 3. Type of Ownership of Public Pools Requiring Modification to Meet the Abigail Taylor Pool Safety Act, as reported by owners/operators who completed the pool survey, (N = 1401)



GRAPH 4. Type of Public Pools Requiring Modification to Meet the Abigail Taylor Pool Safety Act, as reported by owners/operators who completed the pool survey, (N = 1401)

