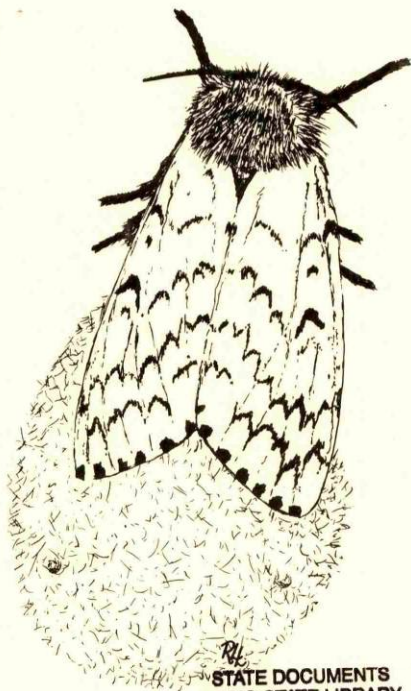
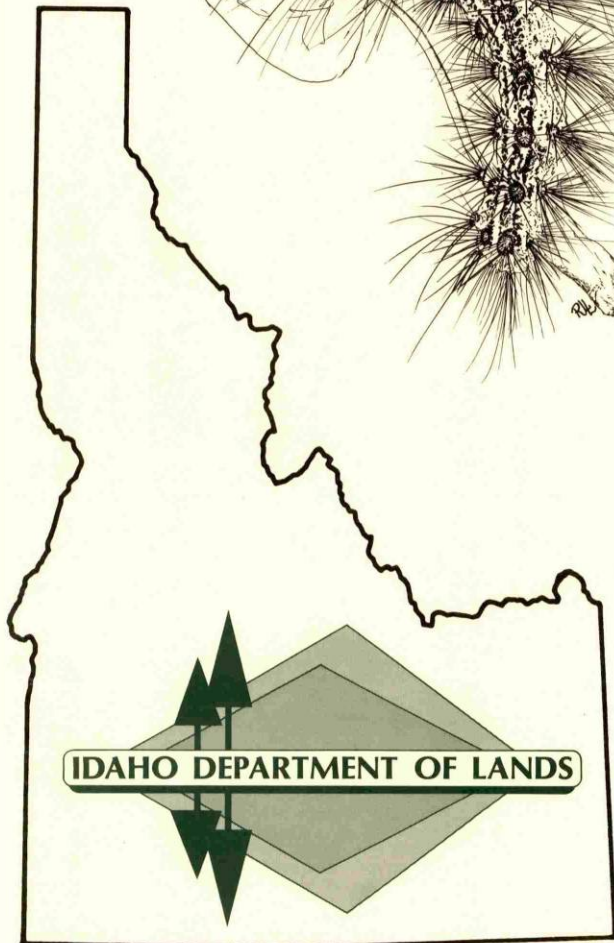
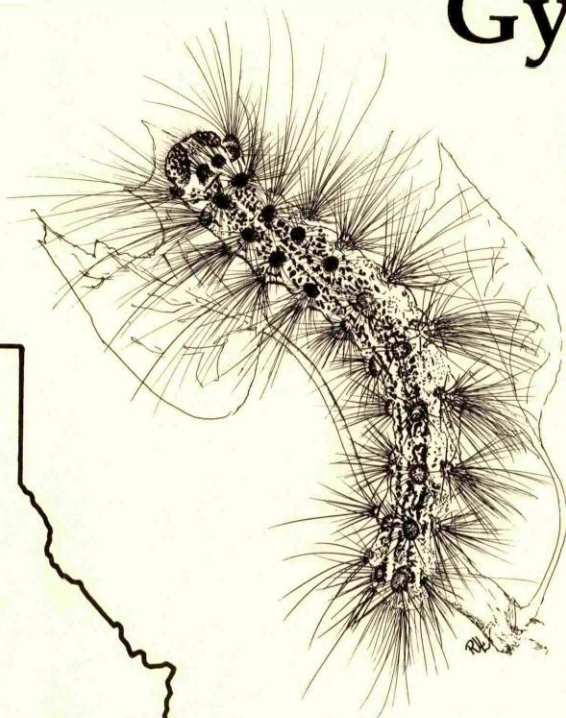


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STATE OF IDAHO
GYPSY MOTH SURVEY TRAPPING PROGRAM
SUMMARY REPORT

2003



by
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R. Ladd Livingston

Idaho Department of Lands
3780 Industrial Avenue South
Coeur d'Alene, Idaho

Report No. IDL 03-5
December 2003

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ABSTRACT

In 2003, no gypsy moths were captured in Idaho. In addition to our regular detection trapping, delimitation traps were placed at both capture sites from 2001. A total of 19 delimitation traps were placed around the Blanchard capture site, north of Spirit Lake in Bonner County, where one male gypsy moth was captured in 2001. In addition, 16 delimitation traps were placed around the Thornton capture site, between Rexburg and Rigby in Madison County, where one male gypsy moth was captured in 2001.

INTRODUCTION

Surveys to detect the introduction of the gypsy moth, *Lymantria dispar* L., have been conducted in Idaho each year since 1974 (Table 1). The first gypsy moth was discovered in 1986 at Sandpoint in Bonner County. The following year numerous additional moths were caught in Sandpoint and Coeur d'Alene. Ground treatments were done in 1988 and aggressive aerial spray eradication programs followed in 1989 and 1990 using a naturally occurring bacterium, *Bacillus thuringiensis* var. *kurstaki* (B.t.k.) as the pesticide (Tisdale and Livingston 1990, Livingston 1990). No gypsy moths have been caught in the treated areas since 1989. Gypsy moths have been caught in various areas throughout the state in the annual detection surveys every year from 1986 through 1995. No gypsy moths were caught in 1996 or 1997 (Mason and Livingston 1991, 1992, 1993, 1994, 1995, 1996, 1997). Seven gypsy moths were caught in 1998, 5 at one site. The other 2 were at widely separated locations of the state (Mason and Livingston 1998). An aerial spray eradication program was conducted in 1999 using B.t.k. No gypsy moths were caught in 1999 or 2000 (Mason and Livingston 1999 & 2000). Two gypsy moths were caught in 2001 (Casey and Livingston 2001), one each at widely separated locations of the state. No gypsy moths were caught in 2002 (Casey and Livingston 2002).

Cooperating agencies, with accompanying responsibilities in the Idaho gypsy moth program, include the following:

- Idaho Department of Lands - Overall program coordination and trapping in northern Idaho, except in Forest Service campgrounds.
- Idaho Department of Agriculture - Trapping in southwestern Idaho and submission of data to the National Agricultural Pest Information System (NAPIS) data library.
- USDA, APHIS - Provides cost share funding, traps, baits, and technical expertise.
- USDA Forest Service, Region 4 - Trapping in southeastern Idaho.
- USDA Forest Service, Region 1 - Trapping in Forest Service campgrounds in northern Idaho.
- Idaho Department of Transportation - Provides monthly reports of vehicle registrations in Idaho from states that are generally infested with gypsy moths.

A summary of the number of traps placed in the 2003 survey is shown in Table 2.

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Table 1 - Gypsy moth trapping history in Idaho.

YEAR	NUMBER OF TRAPS SET				NUMBER OF MOTHS CAUGHT				# POS. TRAPS
	DET. ²	DEL. ³	MASS ⁴	TOTAL	DET. ²	DEL. ³	MASS ⁴	TOTAL	
1974 ¹									
1975	45			45					
1976	254			254					
1977	232			232					
1978	248			248					
1979 ¹									
1980	121			121					
1981	95			95					
1982	35			35					
1983 ¹									
1984 ¹									
1985 ¹									
1986	208			208	1			1	1
1987	420			420	35			35	9
1988	1558	1457		3015	8	414		422	210
1989	2248		7303	9551	17		51	68	54
1990	5640	358	3268	9266	4	2		6	3
1991 ⁵	4641	121		4762	4			4	4
1992	4823	130		4953	2	1		3	3
1993	4314	115		4429	2			2	1
1994	4239	96		4335	1	2		3	3
1995	4522	136		4658	1			1	1
1996	4290	117		4407					
1997	5085	20		5105					
1998	4904			4904	7			7	3
1999	4837	155	90	5082					
2000	5398	36		5434					
2001	5346			5346	2			2	2
2002	5024	35		5059					
2003	5582	35		5617					

¹Trapping did occur in Idaho in these years, and no moths were found. However, records are not complete as to the exact number of traps placed.

²Detection.

³Delimitation.

⁴Mass trapping for control at approximately 9 traps/acre.

⁵Number of traps set in 1991 revised after receipt of final data.

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Table 2 - Number of gypsy moth traps placed, by agency, in Idaho in 2003.

AGENCY	DETECTION TRAPS	DELIMITING TRAPS	MASS TRAPS	TOTAL TRAPS
Idaho Dept. of Lands	3450	19	0	3469
Idaho Dept. of Agriculture	1450	0	0	1450
USFS - Region 4	575	16	0	591
USFS - Region 1	107	0	0	107
TOTALS	5582	35	0	5617

2003 SURVEY PROGRAM

Detection Trapping - In 2003, the cooperating agencies in the Idaho gypsy moth detection program placed 5582 detection traps throughout the state (Table 2). Trapping costs for the 2003 gypsy moth survey program in Idaho are shown in Table 3. Table 4 shows trap placements by county. Pheromone-baited traps were placed on a grid basis at a density of four traps per square mile. Traps were placed throughout the state in cities, towns, surrounding urban areas, and rural communities in accordance with a predetermined rotation schedule (see appendix A). Cities and communities where 20 or more move-ins occur are trapped irrespective of their place in the schedule. A move-in is defined as an individual or family moving to Idaho from a state that is generally infested with gypsy moths. This information is derived from vehicle registration information supplied on a monthly basis by the Idaho Department of Transportation. Most infestations are initiated when an egg mass or other life stage of the gypsy moth arrives on an outdoor household article brought by someone moving into the area. Between May 2002 and April 2003, there were 10,195 move-ins to the state, a 97% increase over the previous year. Campgrounds, tourist attractions, and other high-risk locations were also trapped.

Delimitation Trapping - Delimitation traps were placed at 2 locations in 2003. These traps were placed at a density of 16 traps/mi². At Blanchard, north of Spirit Lake in Bonner County, 19 delimitation traps were placed surrounding the capture site where a single male gypsy moth was captured in 2001. At Thornton, between Rexburg and Rigby in Madison County, 16 delimitation traps were placed surrounding the capture site of a single male gypsy moth in 2001.

Mass Trapping - No mass trapping was done in Idaho in 2003.

No gypsy moths were captured during the 2003 trapping season. As a result of the Blanchard and Thornton sites being gypsy moth free for the past 2 trapping seasons, those areas have been declared gypsy moth free and will return to their original trapping schedules in 2004.

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Table 3 - Costs of the 2003 gypsy moth survey program.

AGENCY	COST
Idaho Department of Lands	\$35,230.00
Idaho Department of Agriculture	\$12,425.00
US Forest Service - Region 1	\$4,000.00
US Forest Service - Region 4	\$10,000.00
USDA - APHIS Direct costs for traps, baits and travel.	\$2,000.00
USDA - APHIS Cooperative grants.	\$22,506.00
TOTAL	\$86,161.00

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Table 4 - 2003 Trap placements by counties.

COUNTY NAME	NO.	DETECTION 4/MILE ²	DELIMITATION 16/MILE ²	MASS 9/ACRE	TOTAL TRAPS
Ada	1	430	0	0	430
Adams	2	0	0	0	0
Bannock	3	119	0	0	119
Bear Lake	4	24	0	0	24
Benewah	5	238	0	0	238
Bingham	6	44	0	0	44
Blaine	7	160	0	0	160
Boise	8	8	0	0	8
Bonner	9	1062	19	0	1081
Bonneville	10	118	0	0	118
Boundary	11	48	0	0	48
Butte	12	0	0	0	0
Camas	13	0	0	0	0
Canyon	14	184	0	0	184
Caribou	15	18	0	0	18
Cassia	16	23	0	0	23
Clark	17	2	0	0	2
Clearwater	18	113	0	0	113
Custer	19	36	0	0	36
Elmore	20	63	0	0	63
Franklin	21	32	0	0	32
Fremont	22	31	0	0	31
Gem	23	0	0	0	0
Gooding	24	76	0	0	76
Idaho	25	154	0	0	154
Jefferson	26	18	0	0	18
Jerome	27	26	0	0	26
Kootenai	28	1196	0	0	1196
Latah	29	444	0	0	444
Lemhi	30	20	0	0	20
Lewis	31	36	0	0	36
Lincoln	32	0	0	0	0
Madison	33	23	16	0	39
Minidoka	34	26	0	0	26
Nez Perce	35	171	0	0	171
Oneida	36	13	0	0	13
Owyhee	37	0	0	0	0
Payette	38	54	0	0	54
Power	39	10	0	0	10
Shoshone	40	95	0	0	95
Teton	41	12	0	0	12
Twin Falls	42	207	0	0	207
Valley	43	203	0	0	203
Washington	44	45	0	0	45
TOTALS		5582	35	0	5617

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GYPSY MOTH DECISION CRITERIA FOR AREAS TO TRAP

Original decision criteria as to what areas (zones) or cities to do detection trapping for gypsy moth in and on what schedule to trap were developed by the Gypsy Moth Technical Advisory Committee in 1989. Revisions have been made in succeeding years. The cities, towns, communities and rural areas of the state are categorized as follows.

Category 1. Detection Surveys conducted annually. This category includes larger cities and towns where numerous people or families moving into the area (move-ins) each year cause a substantial risk of gypsy moth infestation and dictate annual detection trapping. Consideration was also given to cities with colleges, industry, a military base, or tourism that would influence the risk of infestation or that otherwise made annual detection trapping advisable. There are currently 48 category 1 zones in Idaho.

Category 2. This category includes smaller cities and towns with populations greater than 2000 but which normally have fewer move-ins. Detection trapping will normally be done every second year. There are currently 15 category 2 zones in Idaho.

Category 3. This category includes communities and other areas with populations generally less than 2000. Detection trapping is normally done every third year. There are currently 196 category 3 zones in Idaho.

Category 4. This category includes small isolated towns or communities where limited or non-contiguous host interrupts the natural or unaided spread of the insect. These zones will be trapped only every third year, without regard to move-ins. There are currently 39 category 4 zones in Idaho.

Category 5. This category was developed for rural communities or areas where little or no risk of introduction exists due to lack of host or limited population. These areas are not trapped unless something occurs that would increase the risk of introduction in a particular year. There are currently 5 category 5 zones in Idaho that have been trapped.

A large percentage of the gypsy moth movement around the nation is brought about by families moving into a community and bringing gypsy moths in various life stages (particularly egg masses) with them, usually on outdoor household articles. For this reason, it was determined by the Technical Advisory Committee that if more than 20 move-ins occurred in a category 1, 2 or 3 zone in a one year period, that zone would be trapped that year, regardless of where it was in the normal schedule. This additional trapping will not interrupt or alter the regular schedule. A move-in is defined as an individual or family moving to Idaho from a state that is generally infested with gypsy moths. This information is provided to the program by the Idaho Department of Transportation.

The following pages comprise a list of Idaho cities and towns and the category into which they fall.

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GYPSY MOTH TRAP ZONE CATEGORIES

CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
American Falls	Power	1	Rathdrum	Kootenai	1
Athol	Kootenai	1	Rexburg	Madison	1
Bellevue	Blaine	1	Rigby	Jefferson	1
Blackfoot	Bingham	1	Rupert	Minidoka	1
Boise/ Garden City	Ada	1	Salmon	Lemhi	1
Bonnars Ferry	Boundary	1	Sandpoint	Bonner	1
Burley	Cassia	1	Shelley	Bingham	1
Caldwell	Canyon	1	Soda Springs	Caribou	1
Cascade	Valley	1	St. Anthony	Fremont	1
Coeur D'Alene	Kootenai	1	Sun Valley	Blaine	1
Driggs	Teton	1	Twin Falls	Twin Falls	1
Eagle	Ada	1	Victor	Teton	1
Elk City	Idaho	1	Weiser	Washington	1
Emmett	Gem	1	Buhl	Twin Falls	2
Farragut	Kootenai	1	Filer	Twin Falls	2
Fruitland	Payette	1	Gooding	Gooding	2
Hailey	Blaine	1	Grangeville	Idaho	2
Idaho Falls	Bonneville	1	Heyburn	Minidoka	2
Jerome	Jerome	1	Kellogg/Pinehurst	Shoshone	2
Ketchum	Blaine	1	Malad City	Oneida	2
Kimberly	Twin Falls	1	Montpelier	Bear Lake	2
Kuna	Ada	1	Orofino	Clearwater	2
Lewistown	Nez Perce	1	Osborn	Shoshone	2
McCall	Valley	1	Parma	Canyon	2
Meridian	Ada	1	Sagle	Bonner	2
Middleton	Canyon	1	Silver City	Owyhee	2
Moscow	Latah	1	St. Maries	Benewah	2
Mountain Home	Elmore	1	Wolf Lodge	Kootenai	2
Mountain Home AFB	Elmore	1	Aberdeen	Bingham	3
Nampa	Canyon	1	Ahsahka	Clearwater	3
Payette	Payette	1	Ashton	Fremont	3
Pocatello	Bannock	1	Atlanta	Elmore	3
Post Falls	Kootenai	1	Bancroft	Caribou	3
Preston	Franklin	1	Banida	Franklin	3
Priest River	Bonner	1	Banks	Boise	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Basalt	Bingham	3	Eastport	Boundary	3
Beauty Bay	Kootenai	3	Eden	Jerome	3
Benewah	Benewah	3	Elk River	Clearwater	3
Bliss	Gooding	3	Elkhorn Village	Blaine	3
Bloomington	Bear Lake	3	Elmira	Bonner	3
Bovill	Latah	3	Emida	Benewah	3
Bowmont	Canyon	3	Fairfield	Camas	3
Bruneau	Owyhee	3	Featherville	Elmore	3
Calder	Shoshone	3	Ferdinand	Idaho	3
Cambridge	Washington	3	Fernwood	Benewah	3
Cameron	Nez Perce	3	Firth	Bingham	3
Cardiff	Clearwater	3	Fish Haven	Bear Lake	3
Carey	Blaine	3	Fort Hall	Bingham	3
Careywood	Bonner	3	Franklin	Franklin	3
Castleford	Twin Falls	3	Fraser	Clearwater	3
Cavendish	Clearwater	3	Fruitvale	Adams	3
Centerville	Boise	3	Gannett	Blaine	3
Challis	Custer	3	Garden Valley	Boise	3
Chatcolet	Benewah	3	Gardena	Boise	3
Clark Fork	Bonner	3	Genesee	Latah	3
Clarkia	Shoshone	3	Georgetown	Bear Lake	3
Clayton	Custer	3	Gleason Meadows	Bonner	3
Clearwater	Idaho	3	Glenns Ferry	Elmore	3
Clifton	Franklin	3	Glenwood	Idaho	3
Coolin	Bonner	3	Gold Hill	Latah	3
Corral	Camas	3	Grace	Caribou	3
Cottonwood	Idaho	3	Grandview	Owyhee	3
Council	Adams	3	Grangemont	Clearwater	3
Craigmont	Lewis	3	Greenleaf	Canyon	3
Crouch	Boise	3	Hagerman	Gooding	3
Culdesac	Nez Perce	3	Hammett	Elmore	3
Dayton	Franklin	3	Hansen	Twin Falls	3
Deary	Latah	3	Harris Ridge	Idaho	3
Deep Creek	Latah	3	Harrisburg	Idaho	3
Desmet	Benewah	3	Harrison	Kootenai	3
Dietrich	Lincoln	3	Hazelton	Jerome	3
Donnelly	Valley	3	Headquarters	Clearwater	3
Downey	Bannock	3	Helmer	Latah	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Hill City	Camas	3	Midvale	Washington	3
Homedale	Owyhee	3	Moyie Springs	Boundary	3
Hope	Bonner	3	Murphy	Owyhee	3
Horseshoe Bend	Boise	3	Murray	Shoshone	3
Idaho City	Boise	3	Murtaugh	Twin Falls	3
Indian Valley	Adams	3	Naples	Boundary	3
: Inkom	Bannock	3	New Meadows	Adams	3
Iona	Bonneville	3	New Plymouth	Payette	3
: Island Park	Fremont	3	Nordman	Bonner	3
Jaype	Clearwater	3	North Fork	Lemhi	3
Juliaetta	Latah	3	Notus	Canyon	3
Kamiah	Lewis	3	Oakley	Cassia	3
Kendrick	Latah	3	Ola	Gem	3
Kimama	Lincoln	3	Oreana	Owyhee	3
King Hill	Elmore	3	Orofino SE	Clearwater	3
Kooskia	Idaho	3	Oxford	Franklin	3
Kreiger Creek	Bonner	3	Pack River	Bonner	3
Laclede	Bonner	3	Paris	Bear Lake	3
Lake Fork	Valley	3	Paul	Minidoka	3
Lamb Creek	Bonner	3	Pearl	Gem	3
Lapwai	Nez Perce	3	Peck	Nez Perce	3
Larson	Clearwater	3	Picabo	Blaine	3
Lava Hot Spring	Bannock	3	Pierce	Clearwater	3
Leland	Nez Perce	3	Pine	Elmore	3
Lenore	Nez Perce	3	Pioneerville	Boise	3
Letha	Gem	3	Placerville	Boise	3
Lewisville	Jefferson	3	Plummer	Benewah	3
Lowell	Idaho	3	Pollock	Idaho	3
Lowman	Boise	3	Porthill	Boundary	3
Lucile	Idaho	3	Potlatch	Latah	3
: Mackay	Custer	3	Reubens	Lewis	3
Marsing	Owyhee	3	Reynolds	Owyhee	3
: McAbee Falls	Bonner	3	Richfield	Lincoln	3
McCammon	Bannock	3	Riddle	Owyhee	3
Melba	Canyon	3	Riggins	Idaho	3
Menan	Jefferson	3	Ririe	Bonneville	3
Mesa	Adams	3	Roberts	Jefferson	3
Mica Bay	Kootenai	3	Rock Creek	Twin Falls	3

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CITY	COUNTY	CATEGORY	CITY	COUNTY	CATEGORY
Rockford Bay	Kootenai	3	Albion	Cassia	4
Rogerson	Twin Falls	3	Almo	Cassia	4
Rose Lake	Kootenai	3	Arco	Butte	4
Roswell	Canyon	3	Arimo	Bannock	4
Samaria	Oneida	3	Bennington	Bear Lake	4
Shoshone	Lincoln	3	Bern	Bear Lake	4
: Slickpoo Mission	Nez Perce	3	Chester	Freemont	4
Smiths Ferry	Valley	3	Declo	Cassia	4
: Southwick	Nez Perce	3	Dingle	Bear Lake	4
Spalding	Nez Perce	3	Dubois	Clark	4
Spirit Lake	Kootenai	3	Hamer	Jefferson	4
St. Charles	Bear Lake	3	Heise	Madison	4
Stanley	Custer	3	Holbrook	Oneida	4
Star	Elmore	3	Howe	Butte	4
Starkey	Adams	3	Huston	Canyon	4
Stites	Idaho	3	Leadore	Lemhi	4
Sugar City	Madison	3	Malta	Cassia	4
Sweet	Gem	3	May	Lemhi	4
Syringa	Idaho	3	Minidoka	Minidoka	4
Tahoe Ridge	Idaho	3	Montevieu	Jefferson	4
Tamarack	Adams	3	Moore	Butte	4
Teton	Madison	3	Moreland	Bingham	4
Tetonia	Teton	3	Mud Lake	Jefferson	4
Tuttle	Gooding	3	Newdale	Fremont	4
Ucon	Bonneville	3	Ovid	Bear Lake	4
Wallace	Shoshone	3	Parker	Fremont	4
Warm Lake	Valley	3	Pingree	Bingham	4
Warren	Idaho	3	Riverside	Bingham	4
Weippe	Clearwater	3	Robin	Bannock	4
Wendell	Gooding	3	Rockford	Bingham	4
: Weston	Franklin	3	Rockland	Power	4
White Bird	Idaho	3	Springfield	Bingham	4
, Wilder	Canyon	3	Stibnite	Valley	4
Winchester	Lewis	3	Stone	Oneida	4
Worley	Kootenai	3	Swan Valley/Irwin	Bonneville	4
Wrenco	Bonner	3	Tendoy	Lemhi	4
Yellow Pine	Valley	3			
Acequia	Minidoka	4			

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Terreton	Jefferson	4
Thornton	Madison	4
Cobalt	Lemhi	5
Lolo	Idaho	5
Powell	Idaho	5
Sunbeam	Custer	5
Triangle	Owyhee	5

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