

DEER-VEHICLE CRASH HOTSPOTS IN UTAH:
DATA FOR EFFECTIVE MITIGATION

report prepared for

UTAH DIVISION OF WILDLIFE RESOURCES
UTAH DEPARTMENT OF TRANSPORTATION

by

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Much more additional information including citations can be found in:

Kassar, C. 2005. Wildlife vehicle collisions in Utah: An analysis of wildlife road mortality hotspots, economic impacts, and implications for mitigation and management. M. S. Thesis, Utah State University, Logan. 201pp.

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CONTEXT

Animal-vehicle collisions and their associated ecological impacts have been reported since at least the early 1920s and continue to be of national and international concern today. Over 1 million deer-vehicle crashes may occur each year in the United States. On average, ~2,300 deer are reported killed on Utah highways each year. Reported numbers of deer-vehicle collisions may be conservative because only from $\frac{1}{2}$ to $\frac{1}{6}$ of deer vehicle collisions that occur are actually reported to authorities. The number of wildlife-vehicle collisions continues to grow with increasing urban and suburban development, growing numbers of vehicle miles traveled per year (VMT), and an expanding road network. Utah is accessed and divided by ~9500 km (~5,900 miles) of state routes and ~ 56, 327 km (~35,000 miles) of city and county roads that are being used by a growing number of drivers. From 1990 to 2001 (the most current data available), the number of licensed drivers in the state increased 43%, from 1,046,106 to 1,495,887. Vehicle Miles Traveled (VMT) increased from >14 million to > 23 million (60.1%) over the same time period (Bureau of Transportation Statistics 2004). In addition, the population of Utah increased by 29.6 % (510,319 people) from 1990-2000 and is projected to continue with an estimated increase of 554, 501 people (24.8%) from 2000 to 2010. As the population increases, it is expected that licensed drivers and vehicle miles traveled will also grow, making the issue of animal vehicle collisions an even larger safety and conservation priority.

The Utah Department of Transportation (UDOT) maintains a database of reported vehicle crashes dating to 1992. The data originate from collision reports prepared by law enforcement officers and provided to UDOT by the Utah Department of Public Safety. The database contains information for all types of collisions, including those involving wildlife.

A wildlife-vehicle collision is included in the database only if an animal was actually hit, if the estimated vehicle damage exceeded \$1,000, and/or if a person was injured. Collisions included in the database do not account for crashes that occurred as a result of swerving to miss an animal. Due to these constraints and because collisions are underreported, the number of collisions reported within the database are conservative and should be considered minimum estimates.

This report does not deal with large domestic animal collisions (e.g., livestock). Smaller wild animals are also not reported. Hence, we focus on motor vehicle collisions involving almost exclusively mule deer. We used the Utah Department of Transportation (UDOT) vehicle crash database to study deer-vehicle collision patterns and trends from 1992 to 2002 on the 248 state routes in Utah. We evaluated all routes for frequency of deer kills and identified “hotspots” i.e., segments of road with high concentrations of collisions per mile (at least 1 collision/mile/year). We considered hotspots to consist of two parts: (1) a core area, the road segment where collisions per mile are most concentrated; and (2) a mitigation zone, buffering segments on each side of the core where appropriate mitigation actions can account for animal movement and behavior and help avoid the “end of the fence” problem. By “end of the fence problem” we refer to animal movement and the subsequent animal-vehicle crashes that occur at the end of the core fenced area.

SUMMARY OF RESULTS

We identified 24,299 wildlife-vehicle collisions over 11 years. Of these, 24,210 (99.6%) had dates and years associated with them. In Utah, collision rates remained fairly constant over 11 years with a median value of 2,202 collisions per year, a maximum of 2,577, and a minimum of 2,025 collisions per year. We found that 12 routes had a high deer-

vehicle collision rate over their length (≥ 10 collisions per mile) while 16 routes were rated as having a moderate deer-vehicle collision rate ($\geq 5 \leq 9.99$ collisions per mile). There were 148 routes with lower collision rates ($> 0 \leq 4.99$), while 65 had no reported deer-vehicle collisions. Within the database, data was unavailable for seven existing routes: 8, 42, 76, 159, 178, 196, and 666. Wildlife-vehicle collisions were not distributed evenly along routes (Fig. 1). A small number of routes had a disproportionately high concentration of the collisions; 54.6% of all collisions occurred on 10 different routes.

Collision frequency rates ranged from a maximum of 21.27 crashes per mile to a minimum of zero crashes per mile. We found that although the number of deer-vehicle collisions did not vary significantly from year to year, seasonal patterns were pronounced, with one-third of total collisions occurring from October through December. We found a daily pattern with 55.7% of all collisions occurring between 1800 to 2400 hr.

We identified the segments of roads in Utah with considerable deer-vehicle collision rates. We defined a hotspot as a segment of road in which each mile had 11 or more collisions occur within it over 11 years. In our hotspot analysis, we included segments of road consisting of isolated mile segments and those consisting of multiple consecutive mile segments that each fulfilled the collision rate criteria. Overall, given our criteria, we found a total of 183 deer mortality hotspots in Utah. Core hotspots averaged 5.3 miles in length; all isolated hotspots were 1 mile in length. Hotspot collisions were concentrated; 57.74% of all collisions occurred within a cumulative, ~ 1001 km (622 mi), range, or 10.5% of total analyzed highway miles ($\sim 9,500$ total km, $\sim 5,900$ mi).

In this report, we provide data on the 51 routes that include the hotspots we identified. The data presented is intended to assist the Utah Department of Transportation

and Utah Division of Wildlife Resources to prioritize areas statewide for mitigation. These data may also be helpful in addressing mitigation to restore landscape permeability.

STRUCTURE OF THE REPORT

This report consists of a table and graph for each state route in Utah found to have one or more wildlife-vehicle collision hotspots ($n = 176$). This report is ordered by route number. Each table has a legend of information with the following information: the location of the route, the number of collisions on the entire route and how the route ranked according to other routes in collisions per mile. The table contains information about the location of hotspots by milepost, the number of miles within the hotspot and the number of collisions within a hotspot. Here we used the English measuring system because all U.S. road segments are identified to at least the milepost. Each graph displays The distribution of collisions across each of the 176 routes is presented in two ways: (1) by milepost; and (2) by a moving average with an interval of 2 mileposts). The moving average smoothes the fluctuation in data and shows the pattern or trend more clearly.

Fig. 1. State routes with the highest total number of overall wildlife-vehicle collisions, 1992-2002.

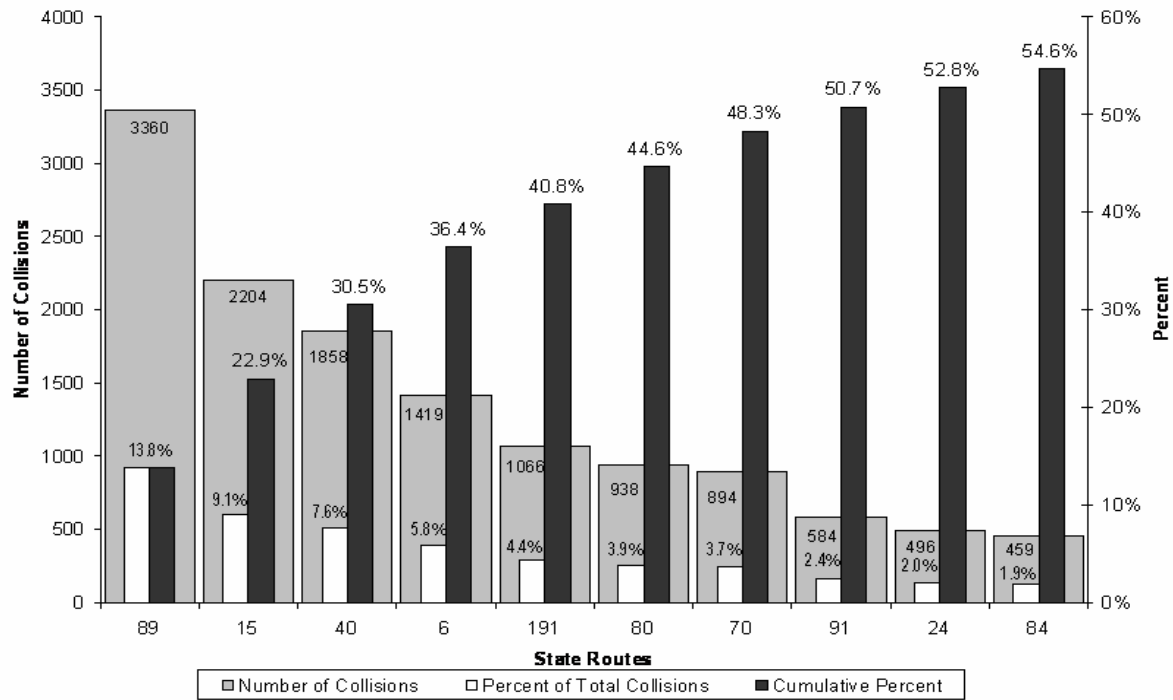


Table 1. Route 6 Hotspots

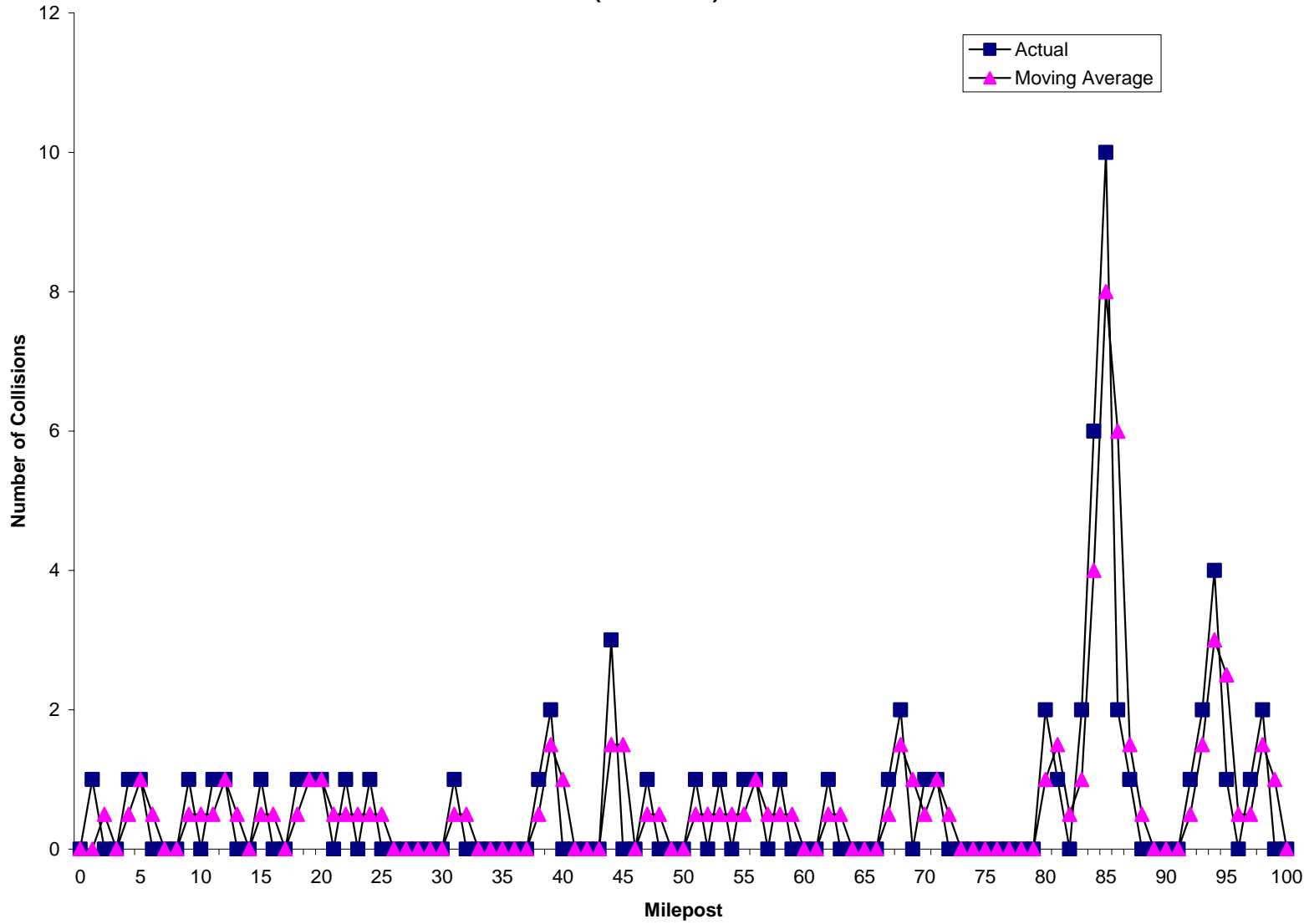
This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 6 from 1992 through 2002. Over these 11 years there were a total of 1419 deer-vehicle collisions, resulting in an overall 4.9 collisions per mile on this route. With 4.9 collisions per mile, Route 6 ranked as the sixth most dangerous long route (50 miles or more) of those analyzed in Utah.

On this route there are 2 larger hotspot regions, milepost 170-210 with 15.12 collisions per mile and milepost 215-234 with 20.95 collisions per mile. In this table, these larger hotspot regions have been broken down into smaller milepost segments that had the majority of the collisions. This table also includes 2 other smaller hotspots that did not fall within the major hotspot regions.

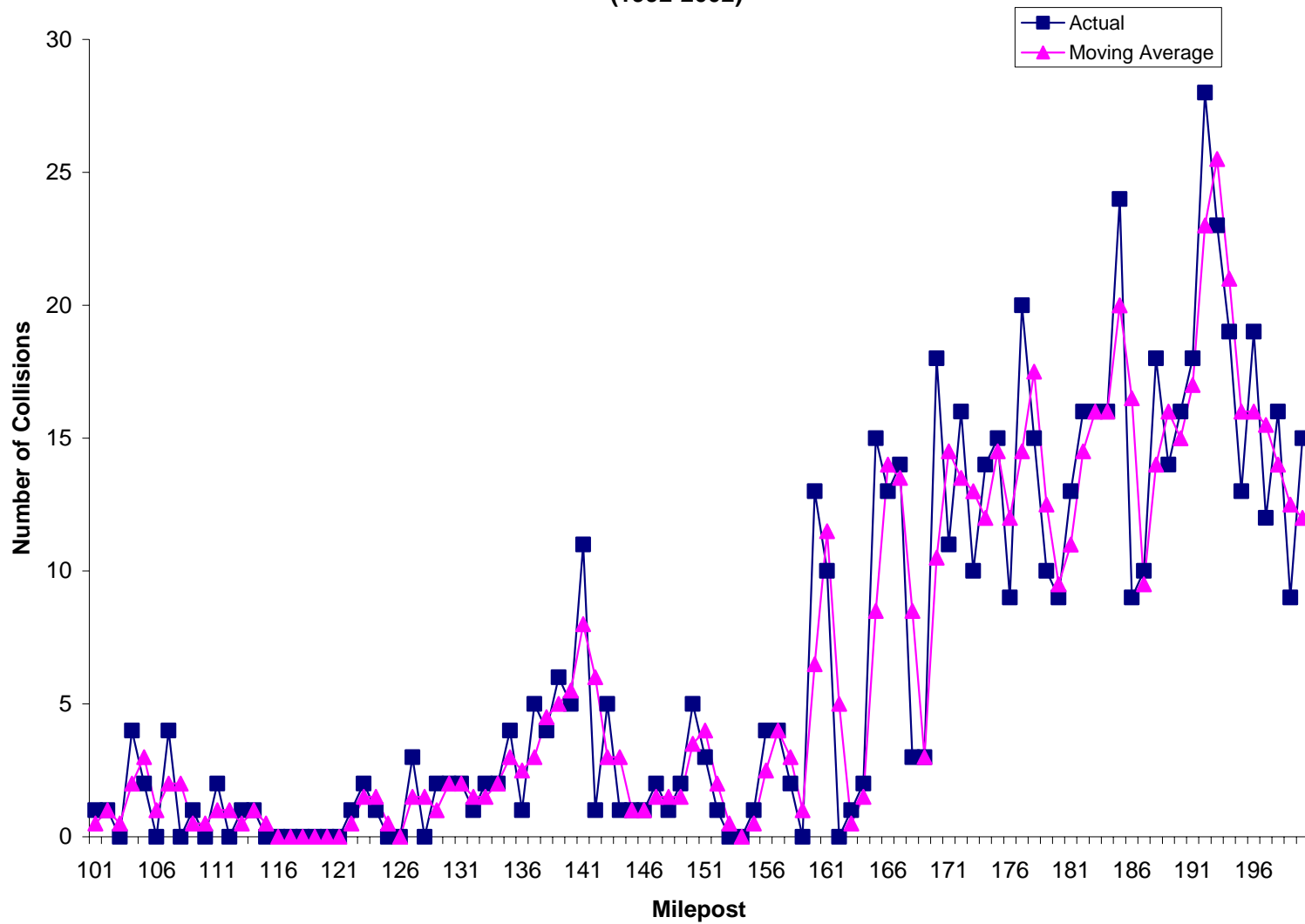
Route 6 is 288.71 miles in length running from the Utah-Nevada state line easterly through Delta and Tintic Junction to the northbound ramps of the North Santaquin Interchange of Route 15; then beginning again at the Moark Connection Interchange of Route 15 easterly through Spanish Fork Canyon and Price to Route 70 west of Green River.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
221-227	7	221	31.57	2.87
229-234	6	127	21.17	1.92
200-203	4	74	18.50	1.68
188-198	11	196	17.82	1.62
177-178	2	35	17.50	1.59
181-185	5	85	17.00	1.55
206-210	5	76	15.20	1.38
218-219	2	30	15.00	1.36
170-175	6	84	14.00	1.27
165-167	3	42	14.00	1.27
141	1	11	11.00	1.00

**Route 6 Deer Road Mortality
Milepost 0-100
(1992-2002)**



Route 6 Deer Road Mortality
Milepost 101-200
(1992-2002)



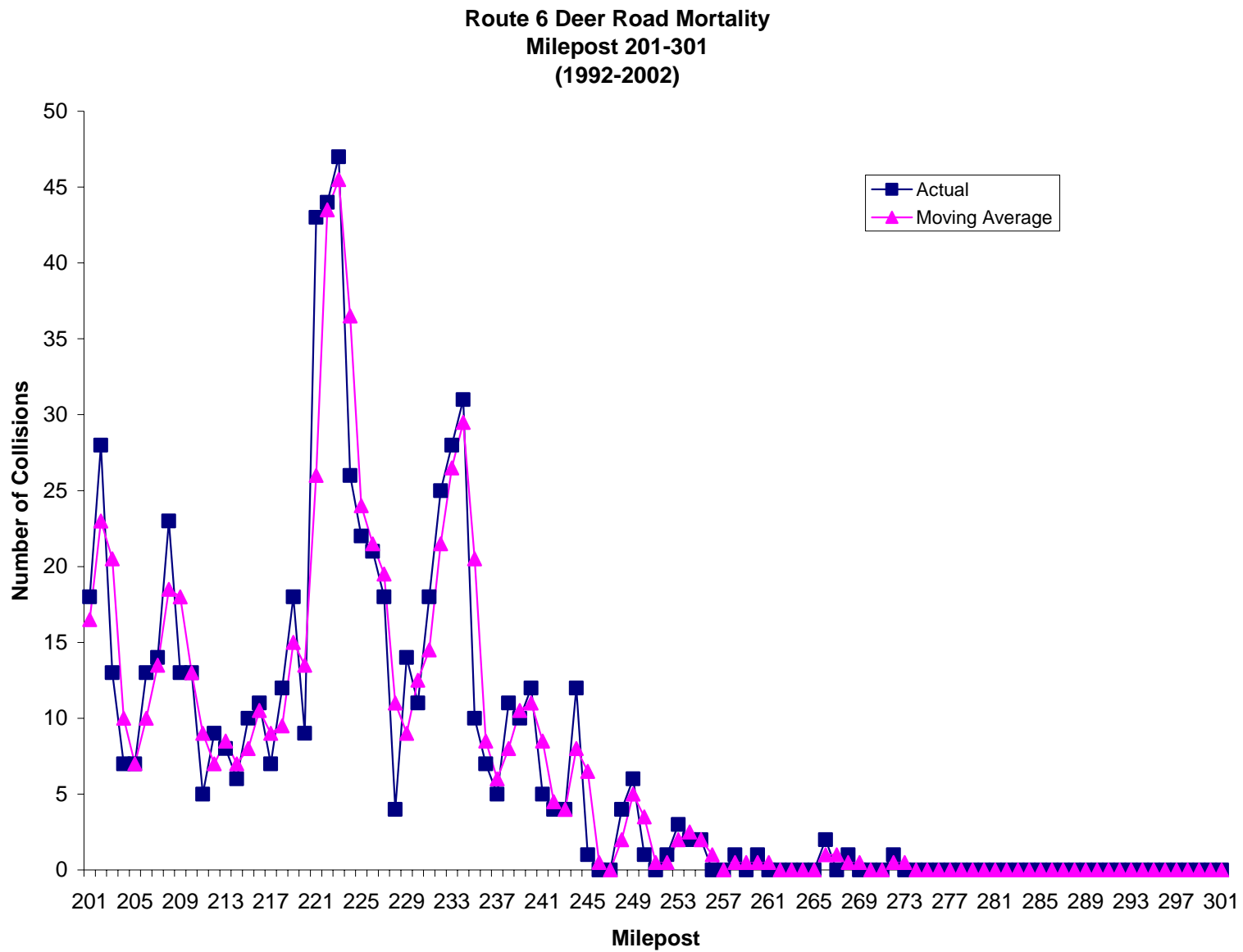


Table 2. Route 9 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 9 from 1992 through 2002. Over these 11 years there were a total of 121 deer-vehicle collisions, resulting in an overall 2.70 collisions per mile on this route. With 2.70 collisions per mile, Route 9 ranked thirtieth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 9 is 44.876 miles in length running from Route 15 at Harrisburg Junction east to Zion National Park south boundary through the Zion National Park east boundary to Route 89 at Mt. Carmel Junction.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
33	1	13	13.00	1.18

Route 9 Deer Road Mortality (1992-2002)

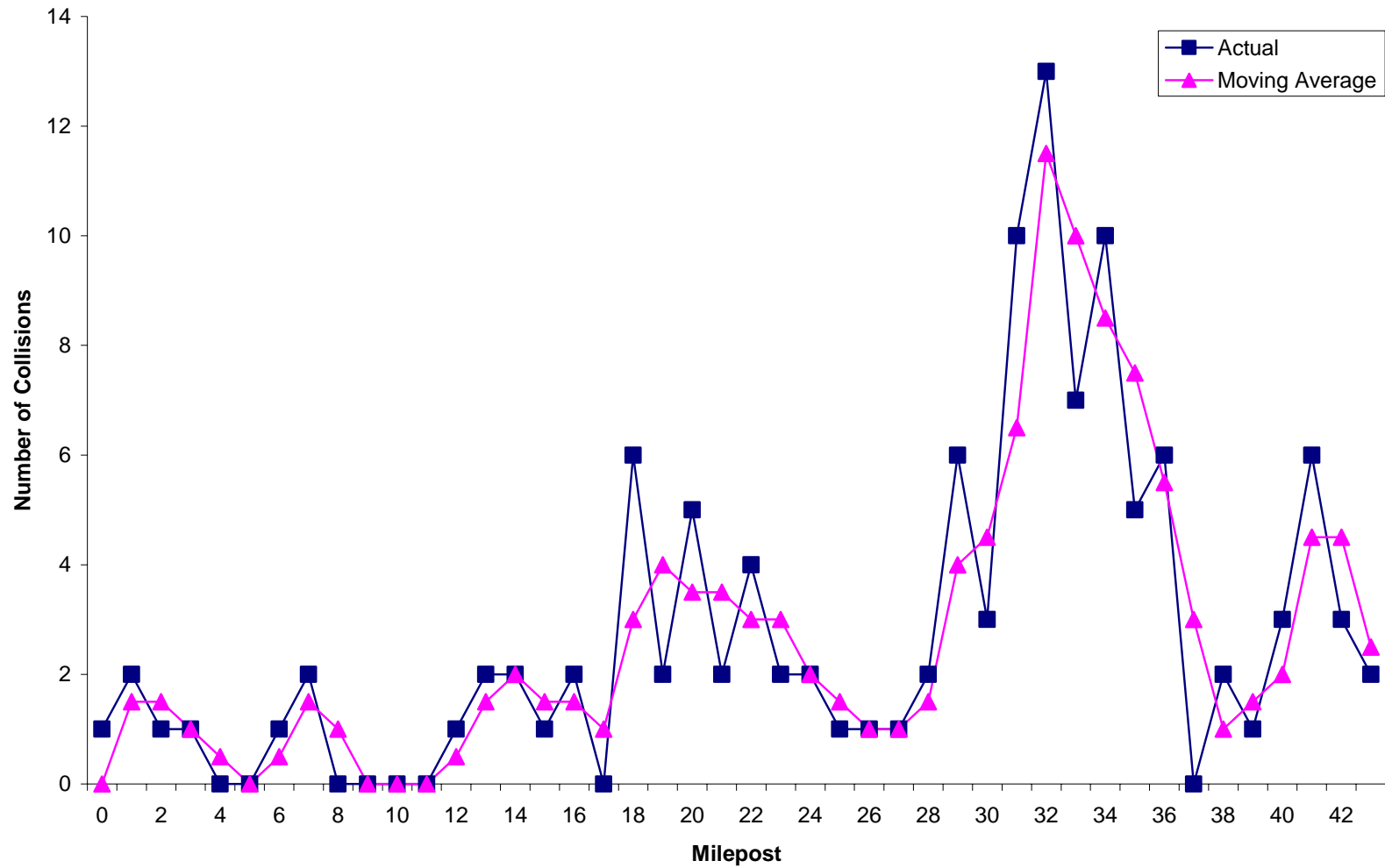


Table 3. Route 10 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 10 from 1992 through 2002. Over these 11 years there were a total of 204 deer-vehicle collisions, resulting in an overall 2.96 collisions per mile on this route. With 2.96 collisions per mile, Route 10 ranked as the fifteenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 10 is 68.885 miles in length beginning from a junction with Route 70 east of Fremont Junction and running northeast to Route 55 in Price.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
28	1	12	12.00	1.09
48	1	11	11.00	1.00

Route 10 Deer Road Mortality (1992-2002)

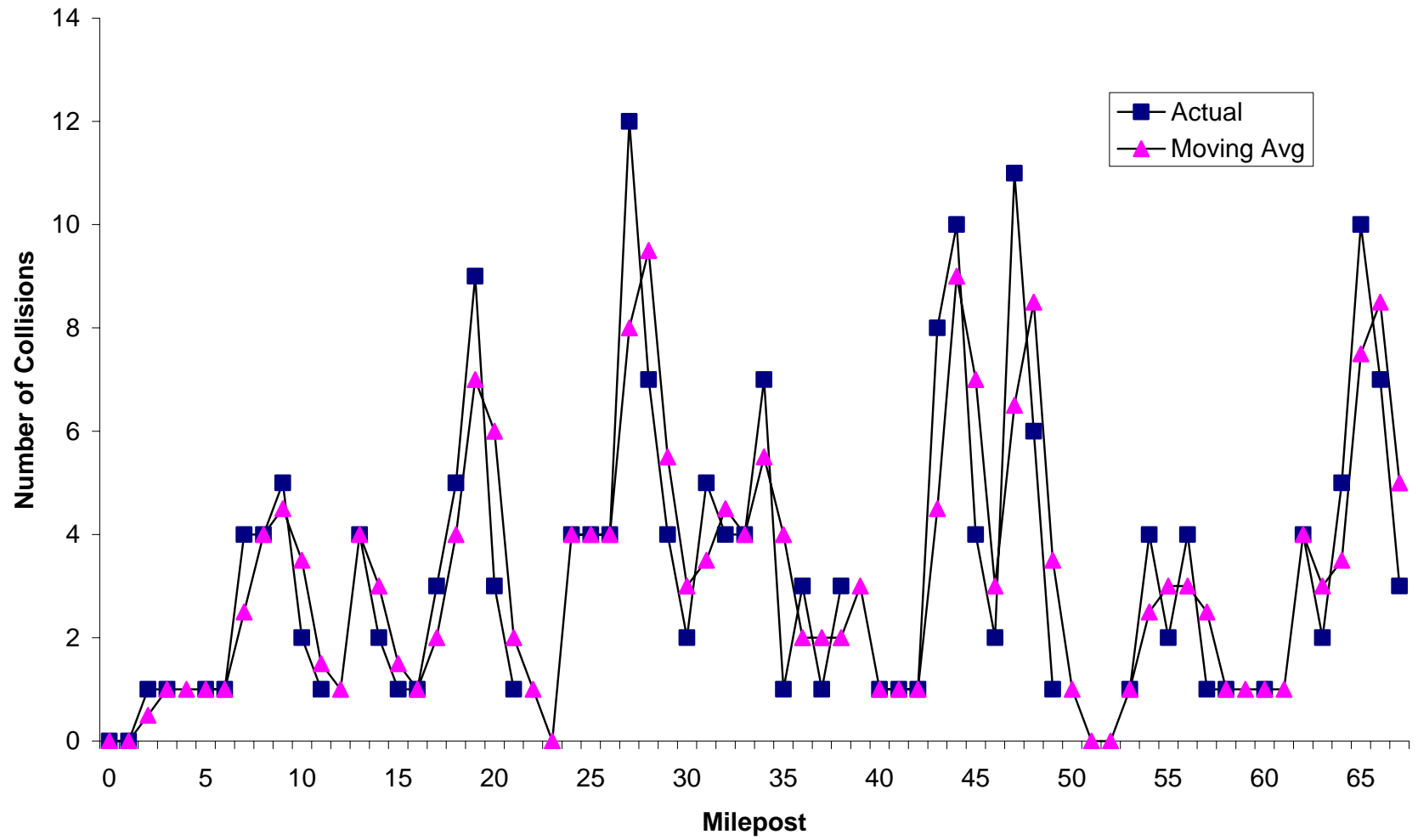


Table 4. Route 15 Hotspots (1992-2002)

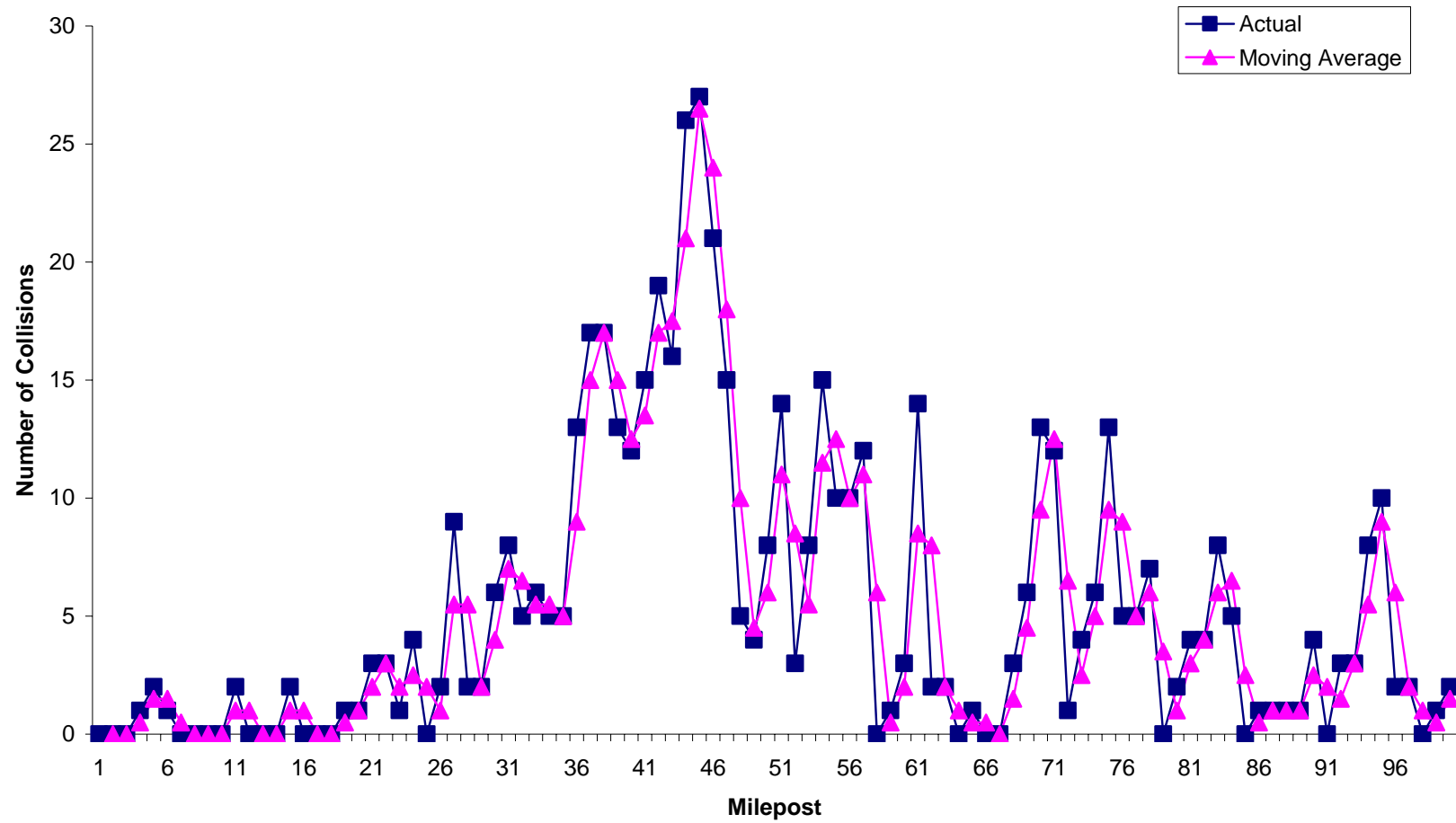
This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 15 from 1992 through 2002. Over these 11 years there were a total of 2204 deer-vehicle collisions, resulting in an overall 5.5 collisions per mile on this route. With 5.5 collisions per mile, Route 15 ranked as the fourth most dangerous long route (50 miles or more) of those analyzed in Utah.

On this route there is a larger hotspot region, milepost 120-143 with 18.46 collisions per mile. In this table, this larger hotspot region has been broken down into smaller milepost segments that had the majority of the collisions. This table also includes the other smaller hotspots that did not fall within this major hotspot region.

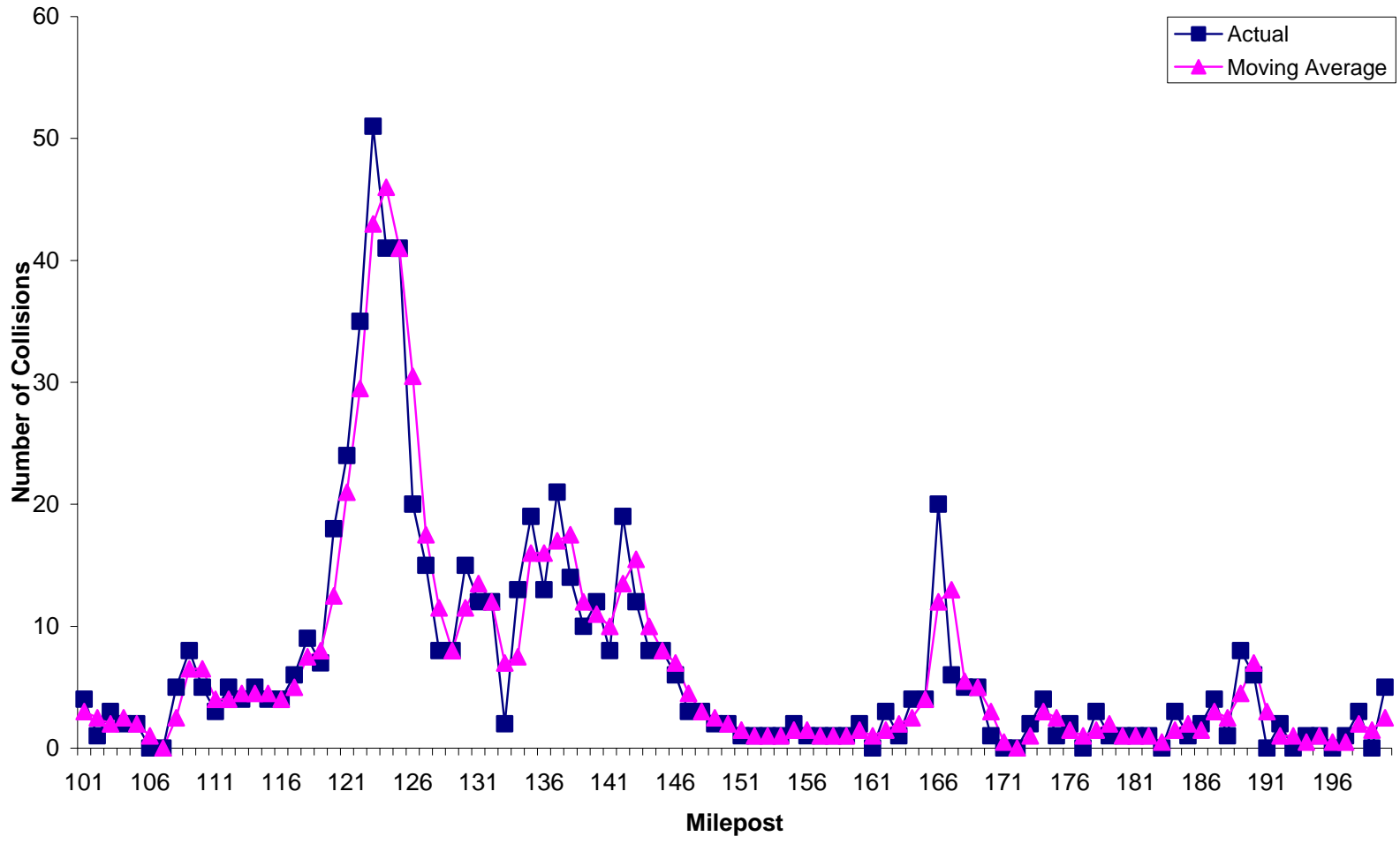
Route 15 is 401.21 miles in length running from the Utah-Arizona state line near St. George to the Utah-Idaho state line south of Malad, Idaho.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
120-127	8	245	30.63	2.78
36-47	12	211	17.58	1.60
142-143	2	31	15.50	1.41
134-140	7	102	14.57	1.32
130-132	3	39	13.00	1.18

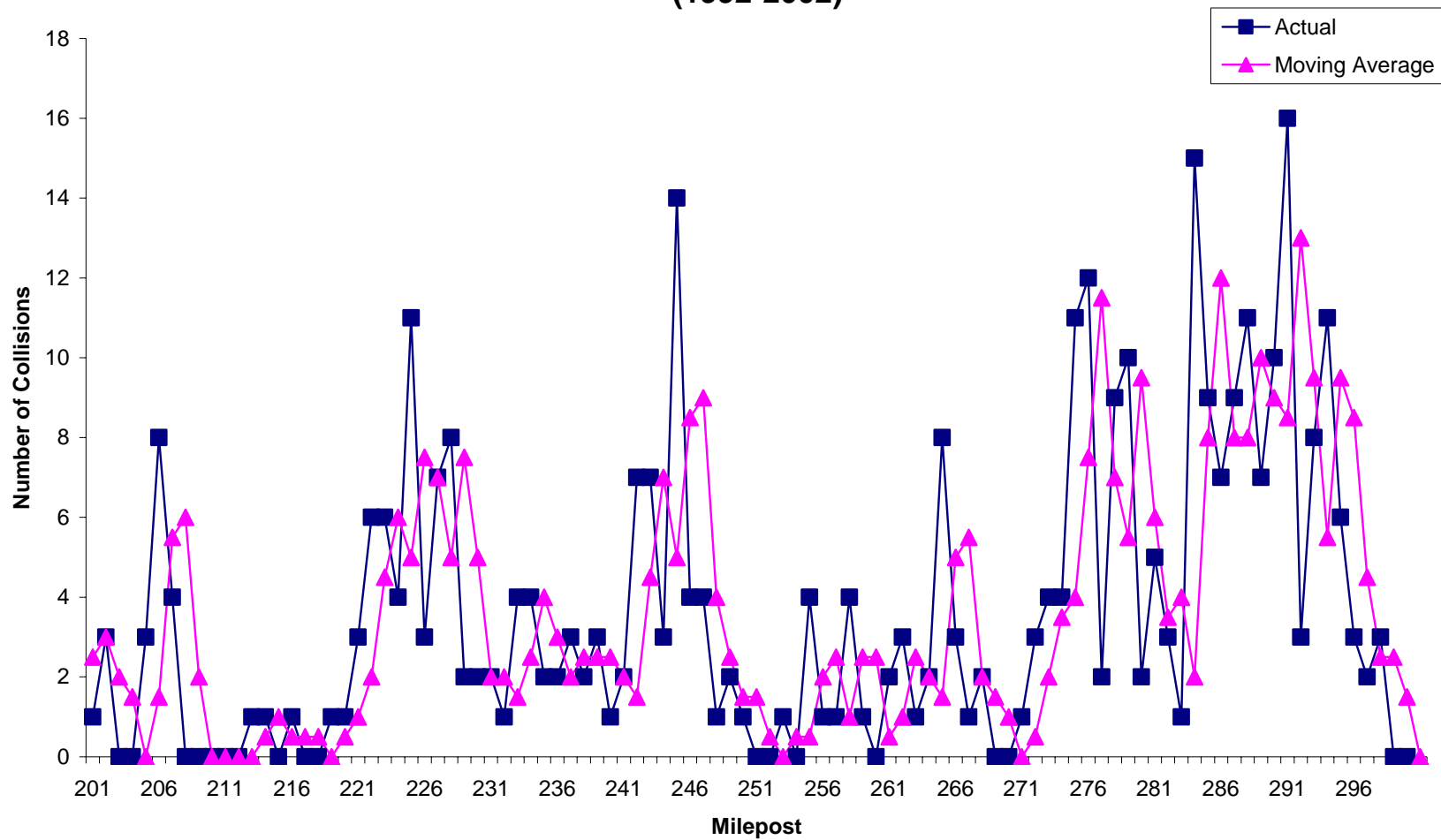
Route 15 Deer Road Mortality
(Milepost 1-100)
(1992-2002)



Route 15 Deer Road Mortality
Milepost 101-200
(1992-2002)



**Route 15 Deer Road Mortality
Milepost 201-300
(1992-2002)**



**Route 15 Deer Road Mortality
Milepost 301-401
(1992-2002)**

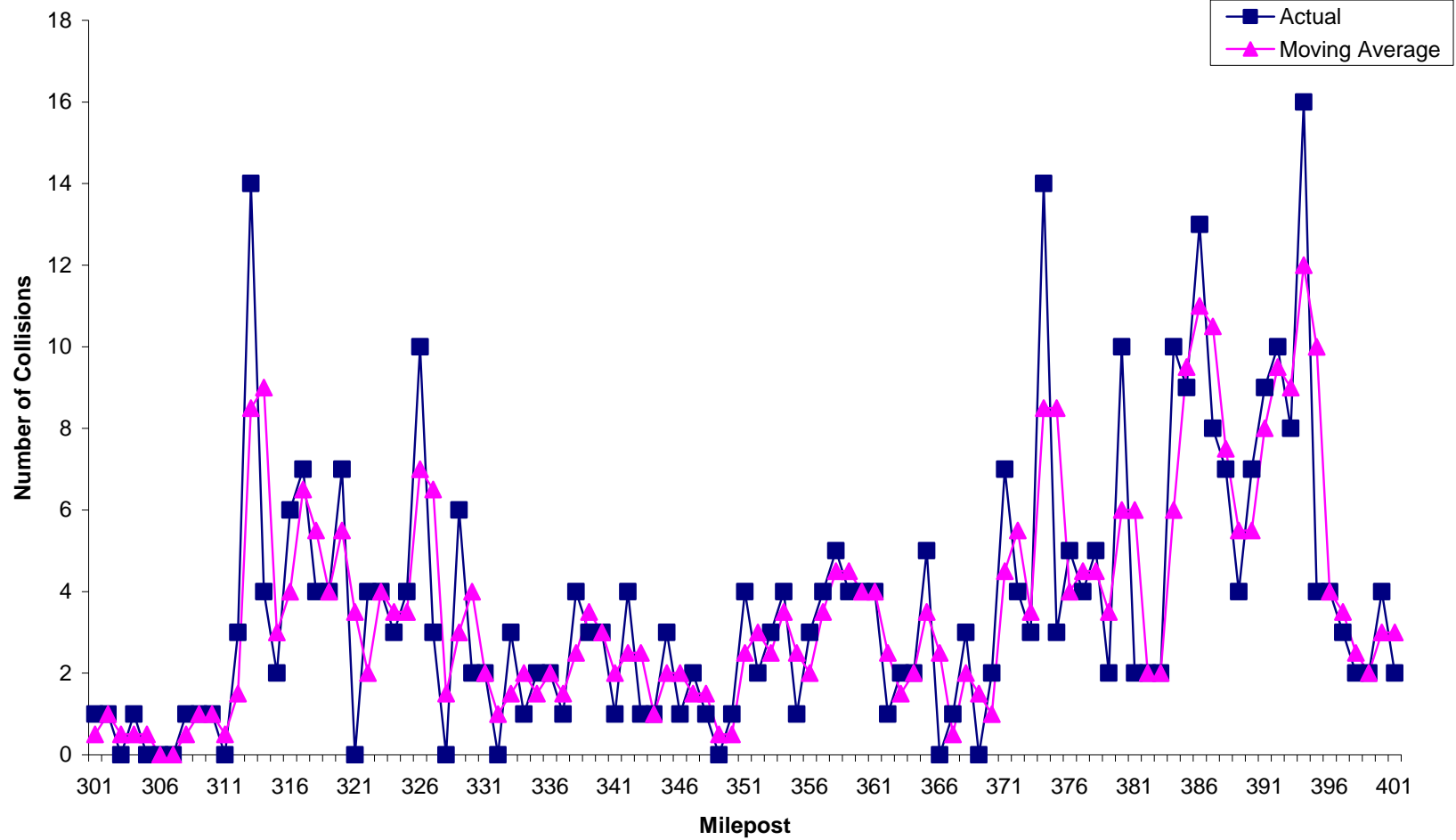


Table 5. Route 18 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 18 from 1992 through 2002. Over these 11 years there were a total of 186 deer-vehicle collisions, resulting in an overall 3.66 collisions per mile on this route. With 3.66 collisions per mile, Route 18 ranked as the tenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 18 is 50.872 miles in length running in a northerly direction from Route 15 in south St. George to Route 56 at Beryl Junction.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
18	1	11	11.00	1.00
26	1	11	11.00	1.00

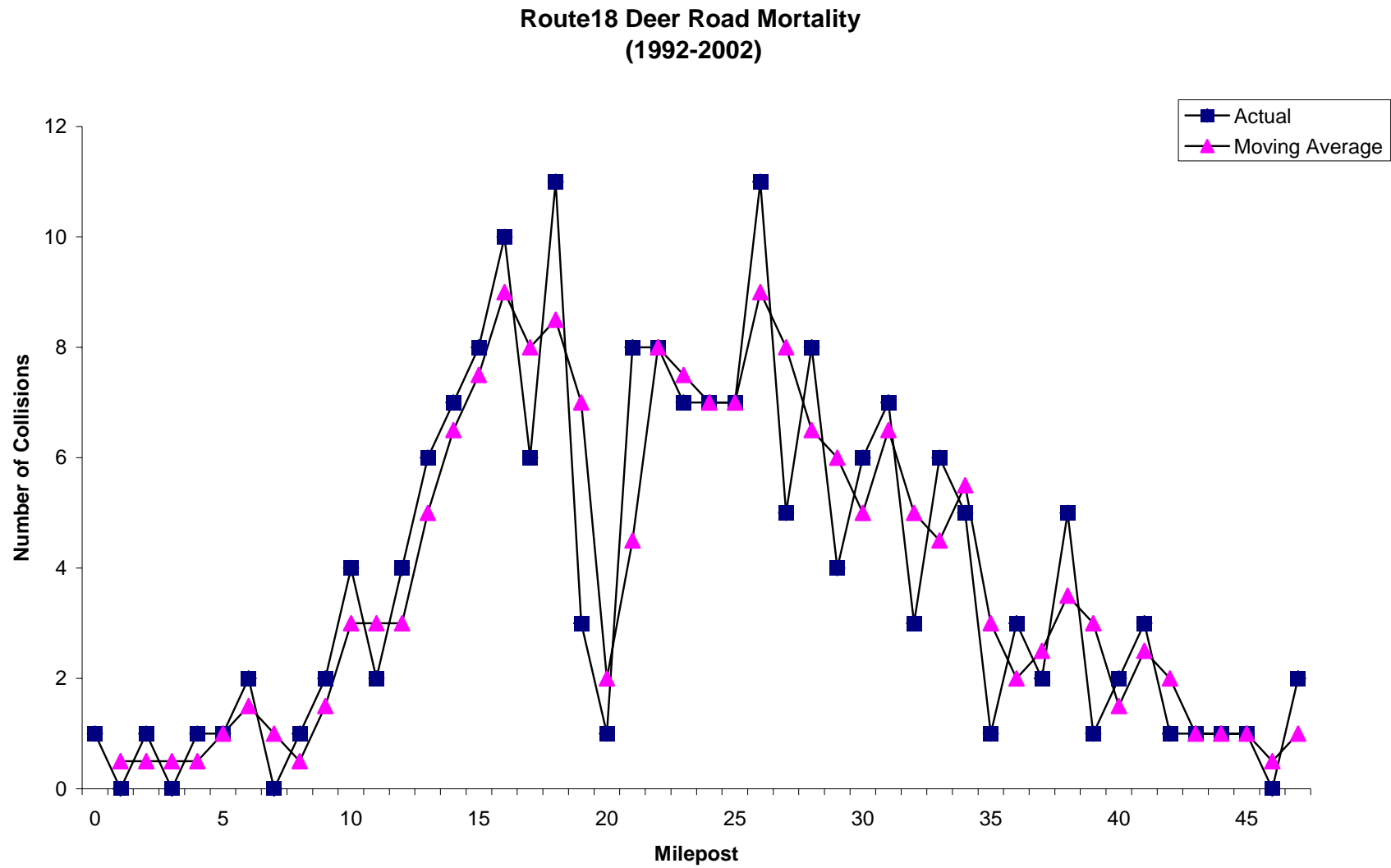


Table 6. Route 21 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 21 from 1992 through 2002. Over these 11 years there were a total of 118 deer-vehicle collisions, resulting in an overall 1.10 collisions per mile on this route. With 1.10 collisions per mile, Route 21 ranked as the eighteenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 21 is 107.31 miles in length running southeast from the Utah-Nevada state line near Garrison to Route 160 near Beaver.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
92	1	11	11.00	1.00
94	1	13	13.00	1.18

Route 21 Deer Road Mortality
(1992-2002)

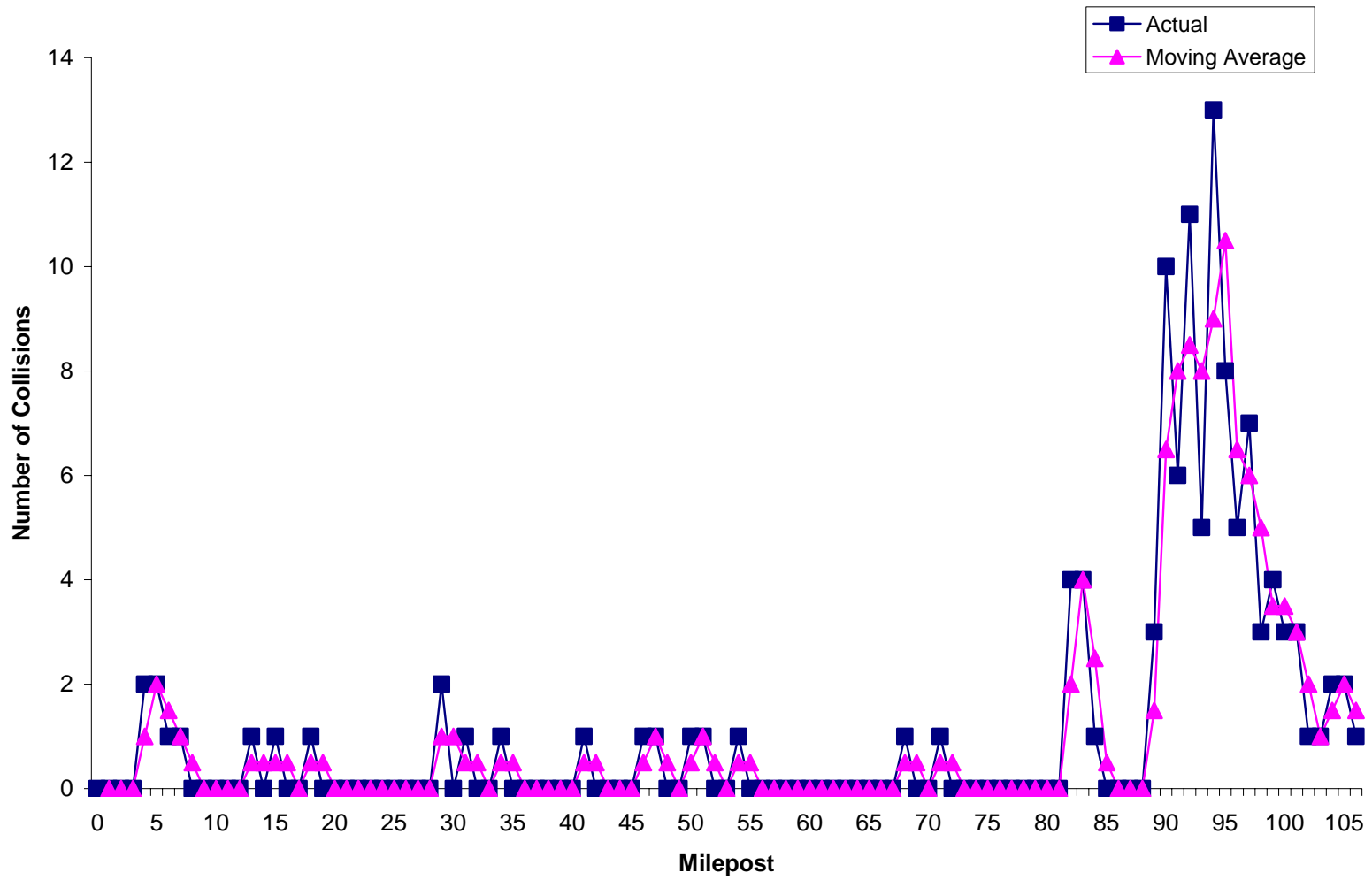


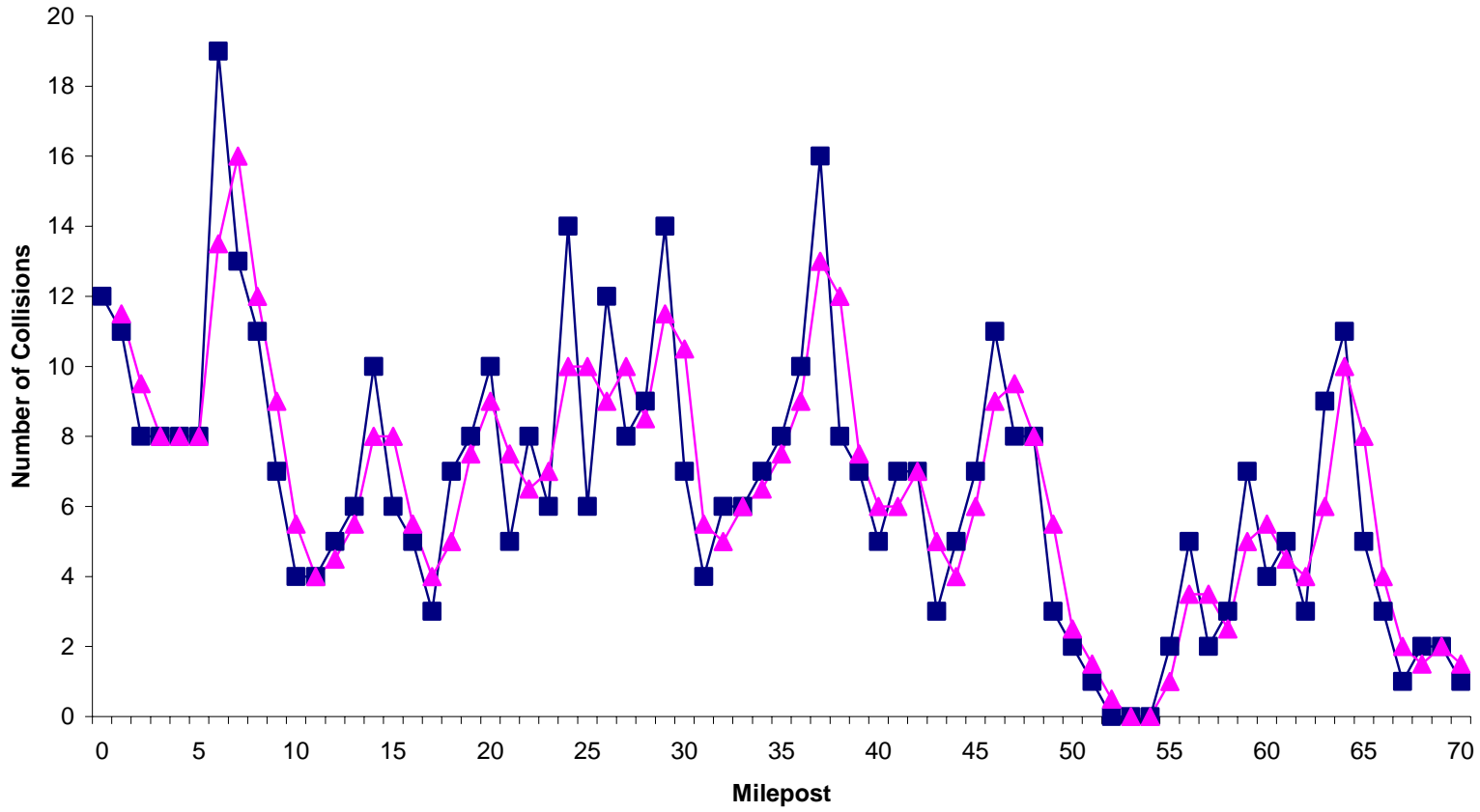
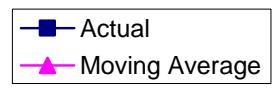
Table 7. Route 24 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 24 from 1992 through 2002. Over these 11 years there were a total of 496 deer-vehicle collisions, resulting in an overall 3.08 collisions per mile on this route. With 3.08 collisions per mile, Route 24 ranked as the thirteenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 24 is 160.913 miles in length running south from Route 50 near Salina through Loa to Hanksville where it turns northeast and runs to Route 70 at the Buckmaster Interchange west of Green River.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
37	1	16	16.00	1.45
6-8	3	43	14.33	1.30
24	1	14	14.00	1.27
29	1	14	14.00	1.27
26	1	12	12.00	1.09
1-2	2	23	11.50	1.05
46	1	11	11.00	1.00
64	1	11	11.00	1.00

Route 24 Deer Road Mortality Milepost 1-70 (1992-2002)



Route 24 Deer Road Mortality
Milepost 71-160
(1992-2002)

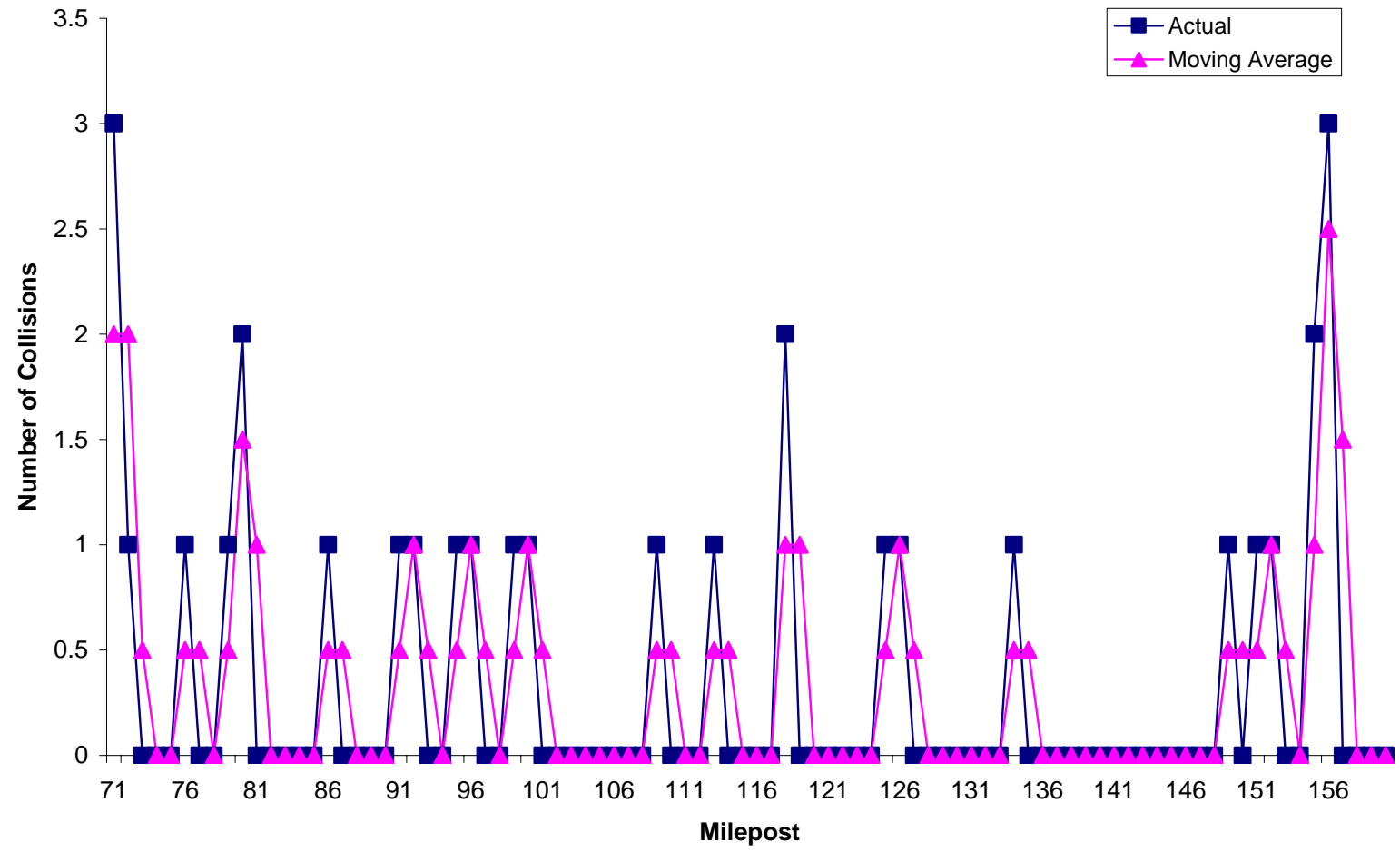


Table 8. Route 28 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 28 from 1992 through 2002. Over these 11 years there were a total of 291 deer-vehicle collisions, resulting in an overall 7.47 collisions per mile on this route. With 7.47 collisions per mile, Route 28 ranked fifteenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 28 is 39.98 miles in length running north from Route 89 in Gunnison through Levan to the southbound on and off ramps of Route 15 at the South Nephi Interchange.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
27-28	2	38	19	1.72
36-38	3	55	18.33	1.66
14	1	12	12	1.09

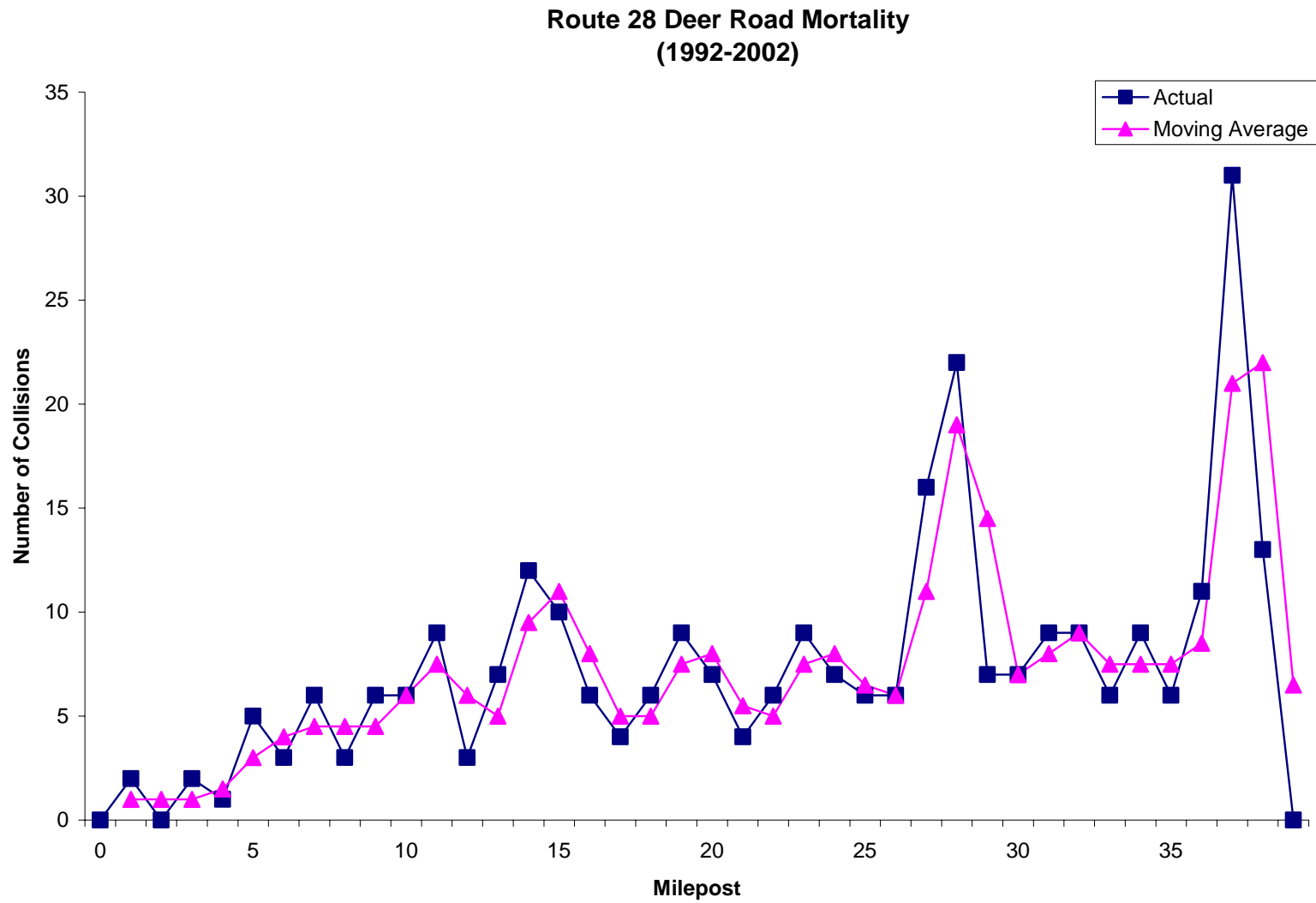


Table 9. Route 30 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 30 from 1992 through 2002. Over these 11 years there were a total of 162 deer-vehicle collisions, resulting in an overall 1.19 collisions per mile on this route. With 1.19 collisions per mile, Route 56 ranked as the seventeenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 30 is 136.099 miles in length beginning at the Utah-Nevada state line and running northeast through Curlew Junction to Route 84 west of Snowville. It begins again at a junction with Route 15 west of Riverside and runs west through Collinston to Route 91 in Logan. The route starts again at a junction with Route 89 in Garden City and runs southeast through Sage Creek Junction to the Utah-Wyoming state line.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
98	1	13	13.00	1.18

Route 30 Deer Road Mortality
(1992-2002)

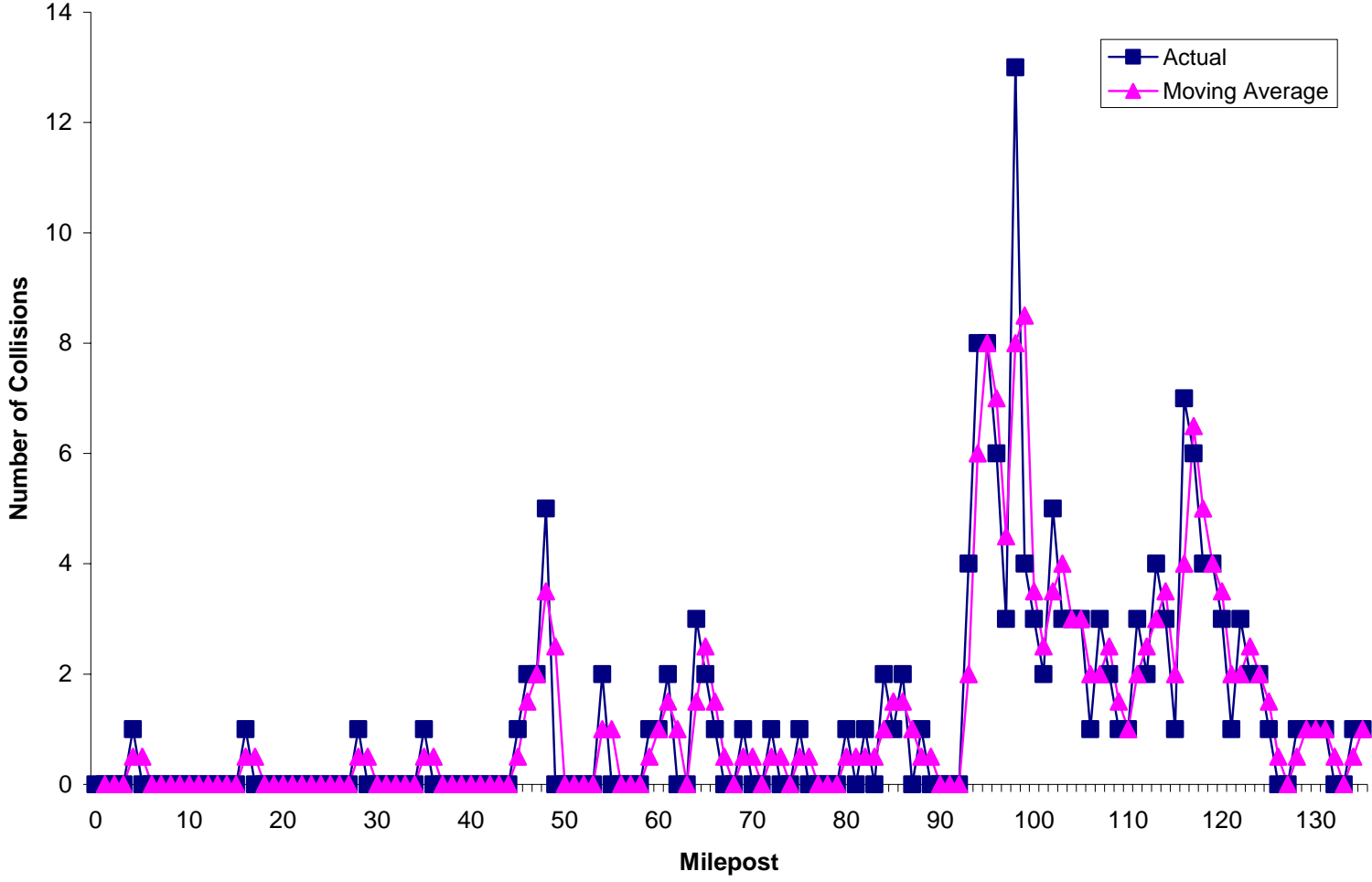


Table 10. Route 32 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 32 from 1992 through 2002. Over these 11 years there were a total of 142 deer-vehicle collisions, resulting in an overall 4.89 collisions per mile on this route. With 4.89 collisions per mile, Route 32 ranked twenty-third in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 32 is 29.056 miles in length running from Route 40 north of Heber City to a junction with Route 35 at Francis and then north through Kamas to the Route 80 westbound off-ramp northeast of Wanship.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
23-24	2	23	11.50	1.05

Route 32 Deer Road Mortality
(1992-2002)

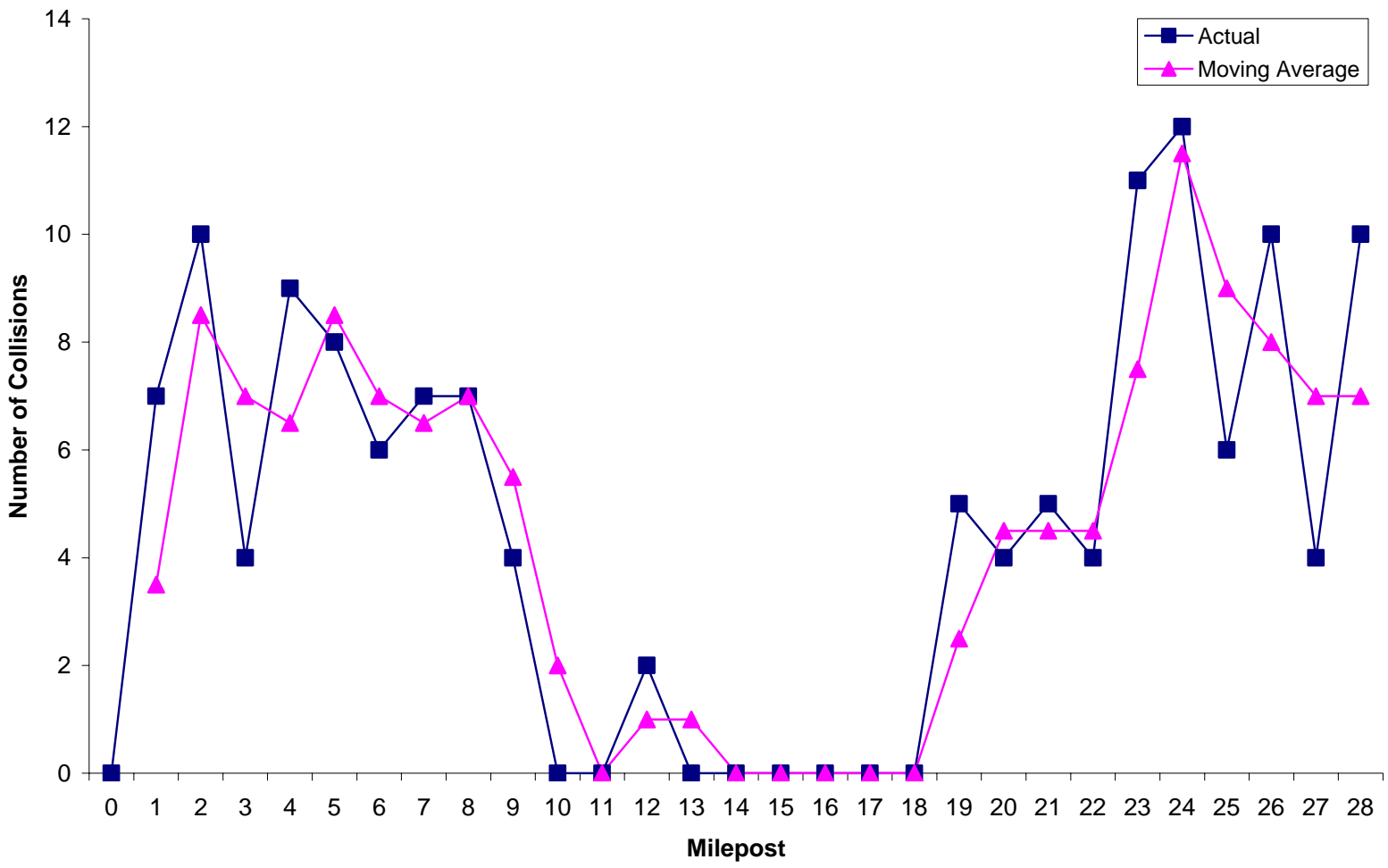


Table 11. Route 36 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 36 from 1992 through 2002. Over these 11 years there were a total of 241 deer-vehicle collisions, resulting in an overall 3.57 collisions per mile on this route. With 3.57 collisions per mile, Route 36 ranked as the eleventh most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 36 is 67.581 miles in length consisting of two separate sections from Route 6 to Tintic Junction. The first section begins near mile post 138 to Tintic Junction while the second section begins near mile post 136 to Tintic Junction running north through Tooele and Mills Junction to Route 80 at Tooele-Grantsville Interchange.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
50-53	4	107	26.75	2.43
48	1	12	12.00	1.09

Route 36 Deer Road Mortality
(1992-2002)

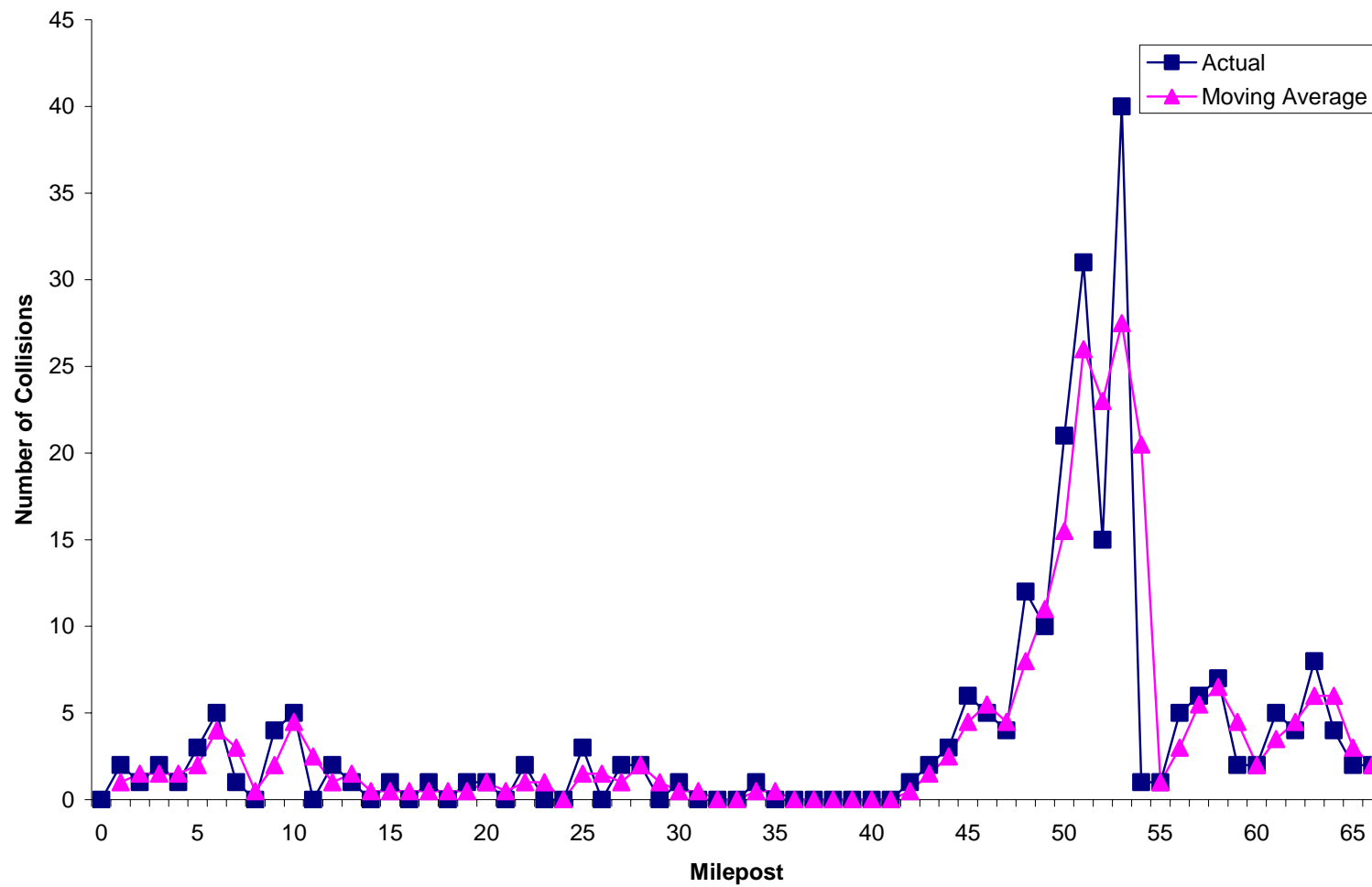


Table 12. Route 38 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 38 from 1992 through 2002. Over these 11 years there were a total of 230 deer-vehicle collisions, resulting in an overall 12.04 collisions per mile on this route. With 12.04 collisions per mile, Route 38 ranked eighth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 38 is 19.1 miles in length running from Route 13 in Brigham City north through Honeyville and Deweyville to Route 30 in Collinston.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-7	8	142	17.75	1.61
14-16	3	38	12.67	1.15
9	1	11	11.00	1.00

**Route 38 Deer Road Mortality
(1992-2002)**

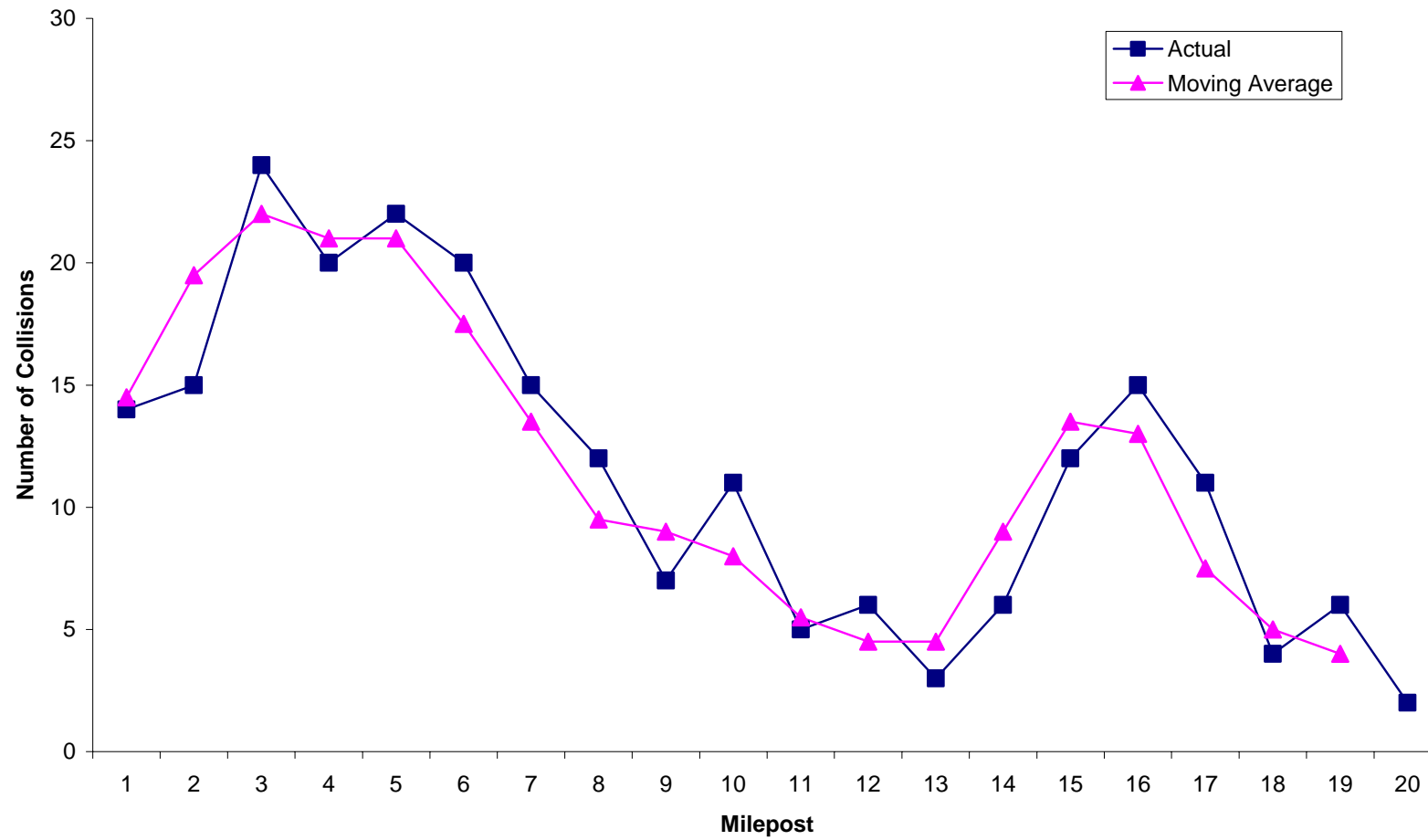


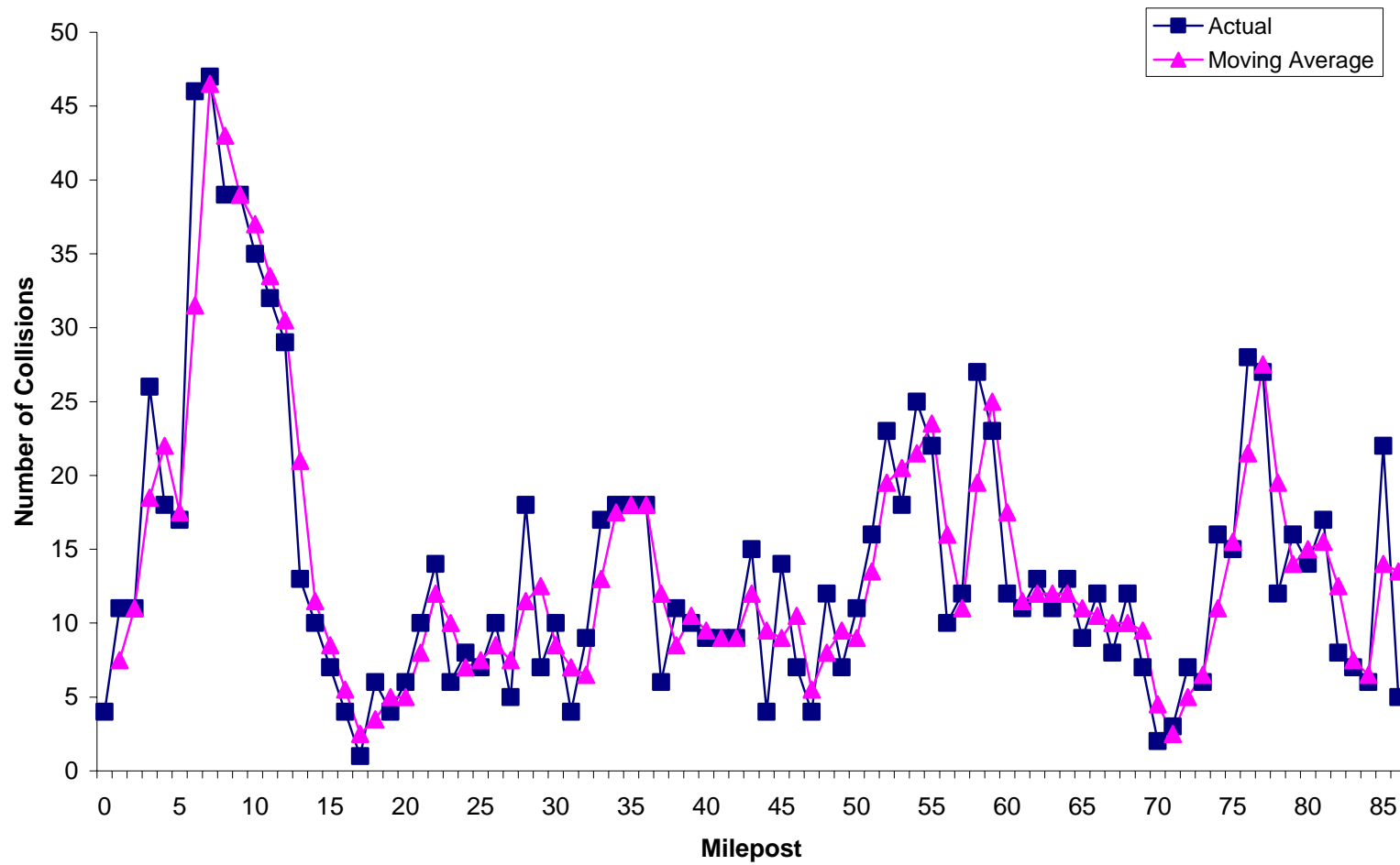
Table 13. Route 40 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 40 from 1992 through 2002. Over these 11 years there were a total of 1858 deer-vehicle collisions, resulting in an overall 10.61 collisions per mile on this route. With 10.61 collisions per mile, Route 40 ranked as the most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 40 is 175.138 miles in length running from Route 80 at Silver Creek Junction southerly through Heber City then easterly through Duchesne, Vernal, and Jensen to the Utah-Colorado state line.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
001-13	13	363	27.92	2.54
85	1	22	22.00	2.00
88-89	2	38	19.00	1.73
122-123	2	38	19.00	1.73
96-106	11	207	18.82	1.71
74-81	8	145	18.13	1.65
28	1	18	18.00	1.64
33-36	4	71	17.75	1.61
50-68	19	288	15.16	1.38
43	1	15	15.00	1.36
22	1	14	14.00	1.27
45	1	14	14.00	1.27
92	1	14	14.00	1.27
146-148	3	39	13.00	1.18
112	1	13	13.00	1.18
48	1	12	12.00	1.09
109-110	2	23	11.50	1.05
38	1	11	11.00	1.00
153	1	11	11.00	1.00

Route 40 Deer Road Mortality
Milepost 1-86
(1992-2002)



Route 40 Deer Road Mortality
Milepost 87-174
(1992-2002)

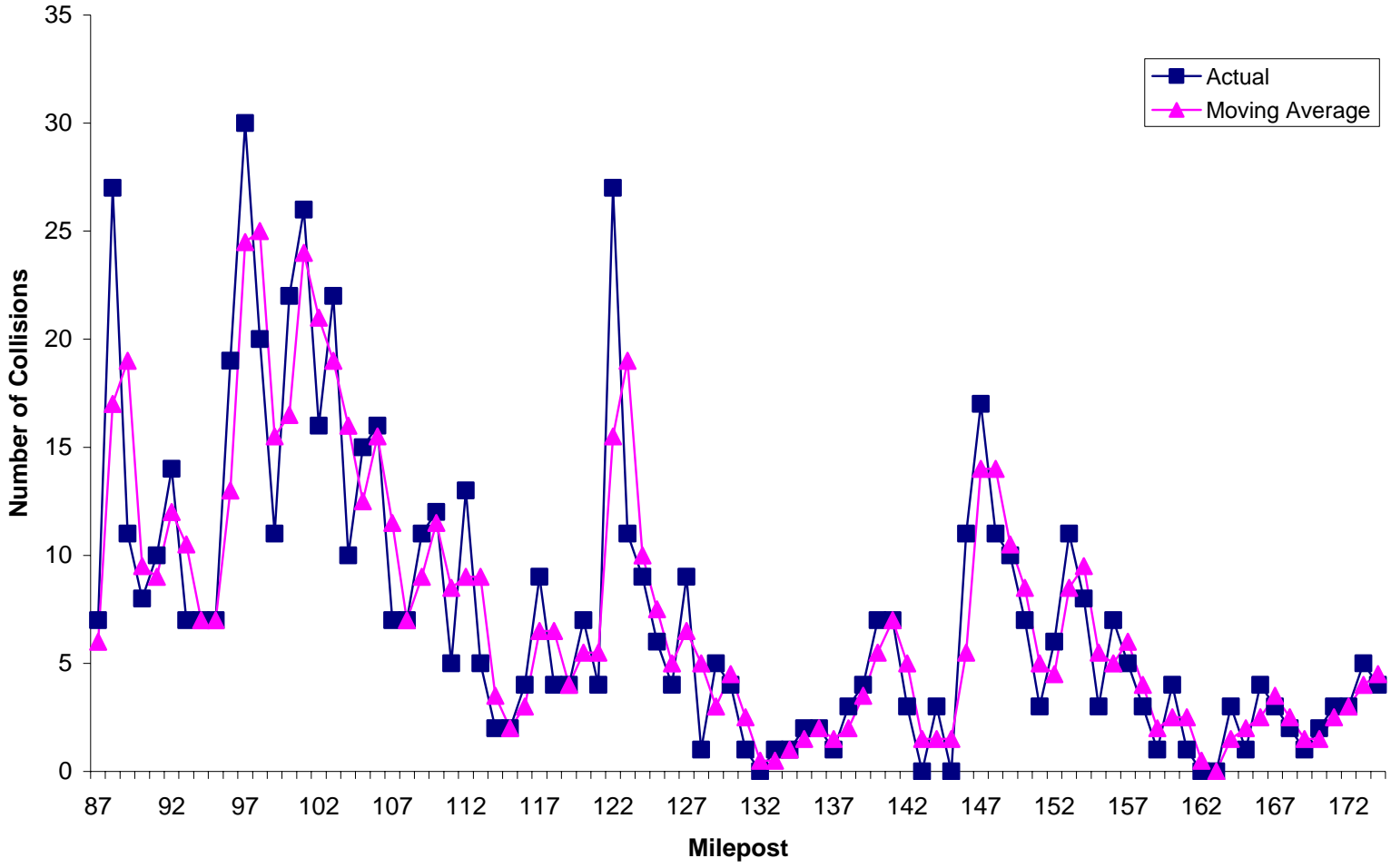


Table 14. Route 48 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by accidents per mile, for Route 48 from 1992 through 2002. Over these 11 years there were a total of 75 deer-vehicle collisions, resulting in an overall 5.91 accidents per mile on this route. With 5.91 accidents per mile, Route 48 ranked nineteenth in accidents per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 48 is 12.691 miles in length beginning northeast from the Kennecott gate in Copperton to 7800 South then east on 7800 South to Route 68 in West Jordan. It begins going east again at Route 68 on 7000 South and 7200 South to Route 89.

Location of Hotspot	Total Hotspot Mileage	Accidents within Hotspot	Hotspot Accidents/Mile	Hotspot Accidents/Mile/Year
0-1	2	32	16.00	1.45

Route 48 Deer Road Mortality
(1992-2002)

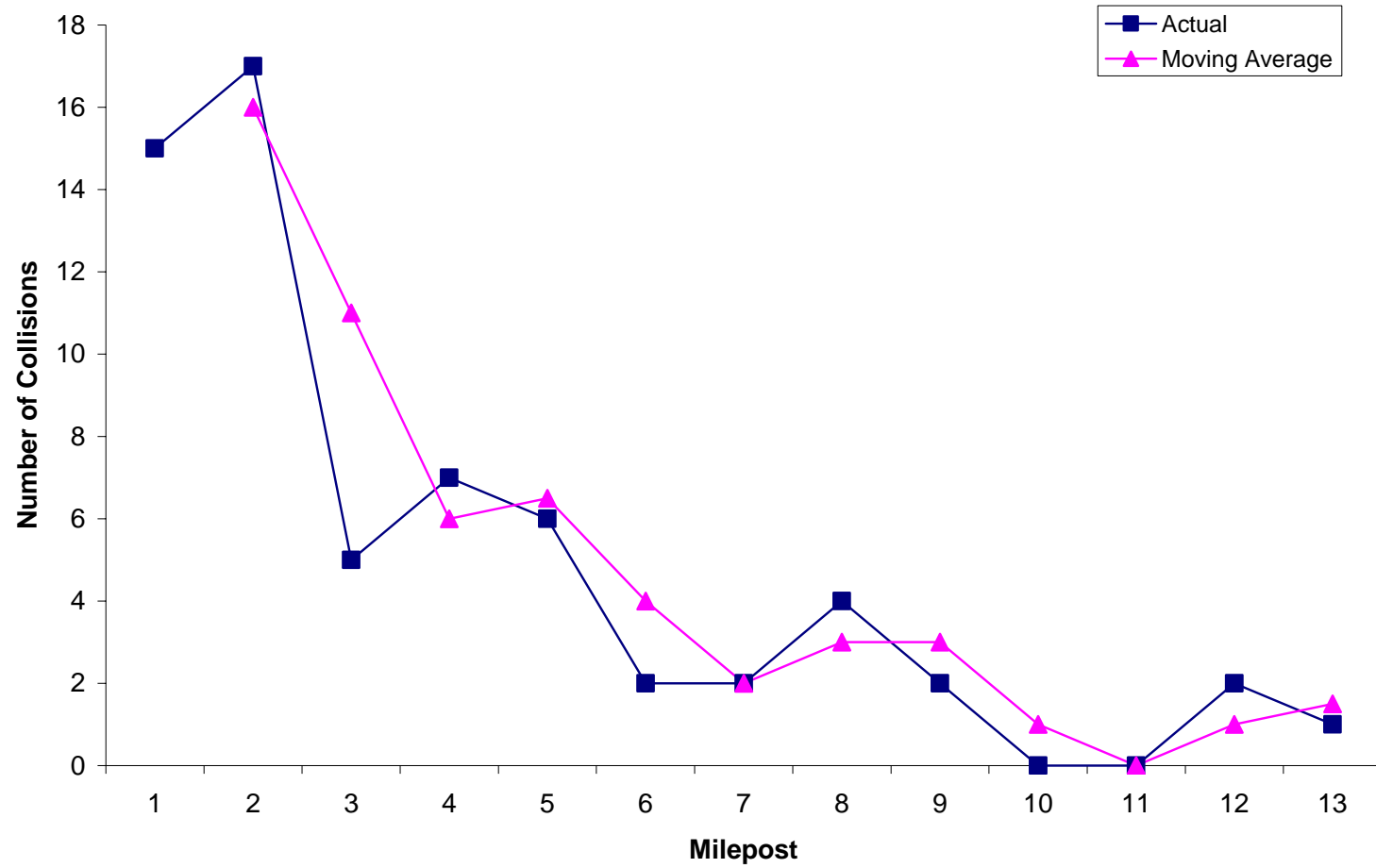


Table 15. Route 52 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 52 from 1992 through 2002. Over these 11 years there were a total of 82 deer-vehicle collisions, resulting in an overall 18.32 collisions per mile on this route. With 18.32 collisions per mile, Route 52 ranked second in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 52 is 4.476 miles in length running from east from Route 114 on 8th North in Orem to Route 189 at Olmstead.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
2-3	2	80	40.00	3.64

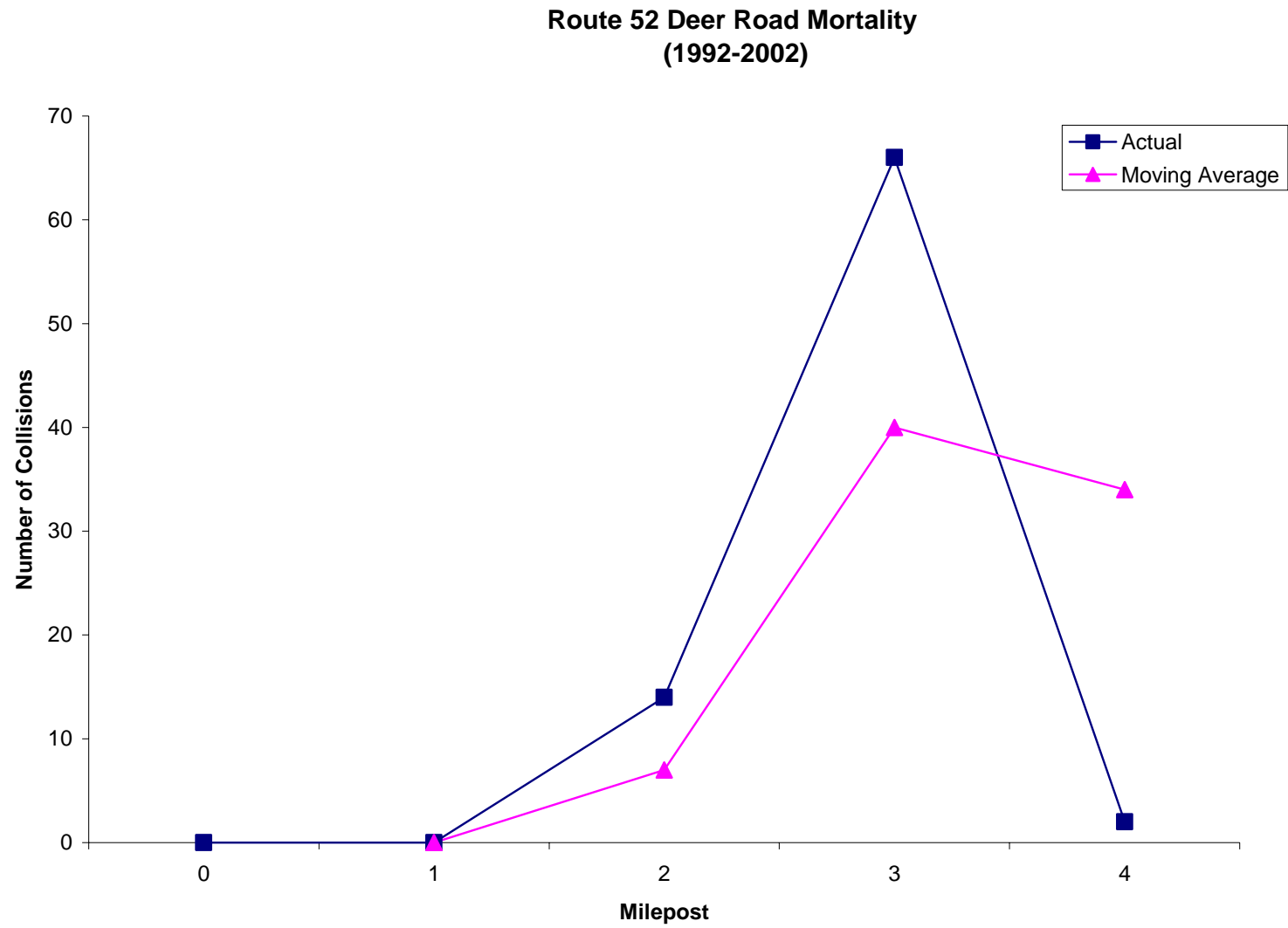


Table 16. Route 56 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 56 from 1992 through 2002. Over these 11 years there were a total of 118 deer-vehicle collisions, resulting in an overall 1.92 collisions per mile on this route. With 1.92 collisions per mile, Route 56 ranked as the sixteenth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 56 is 61.387 miles in length running east from the Utah-Nevada state line to Route 130 in Cedar City.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
48	1	12	12.00	1.09

Route 56 Deer Road Mortality (1992-2002)

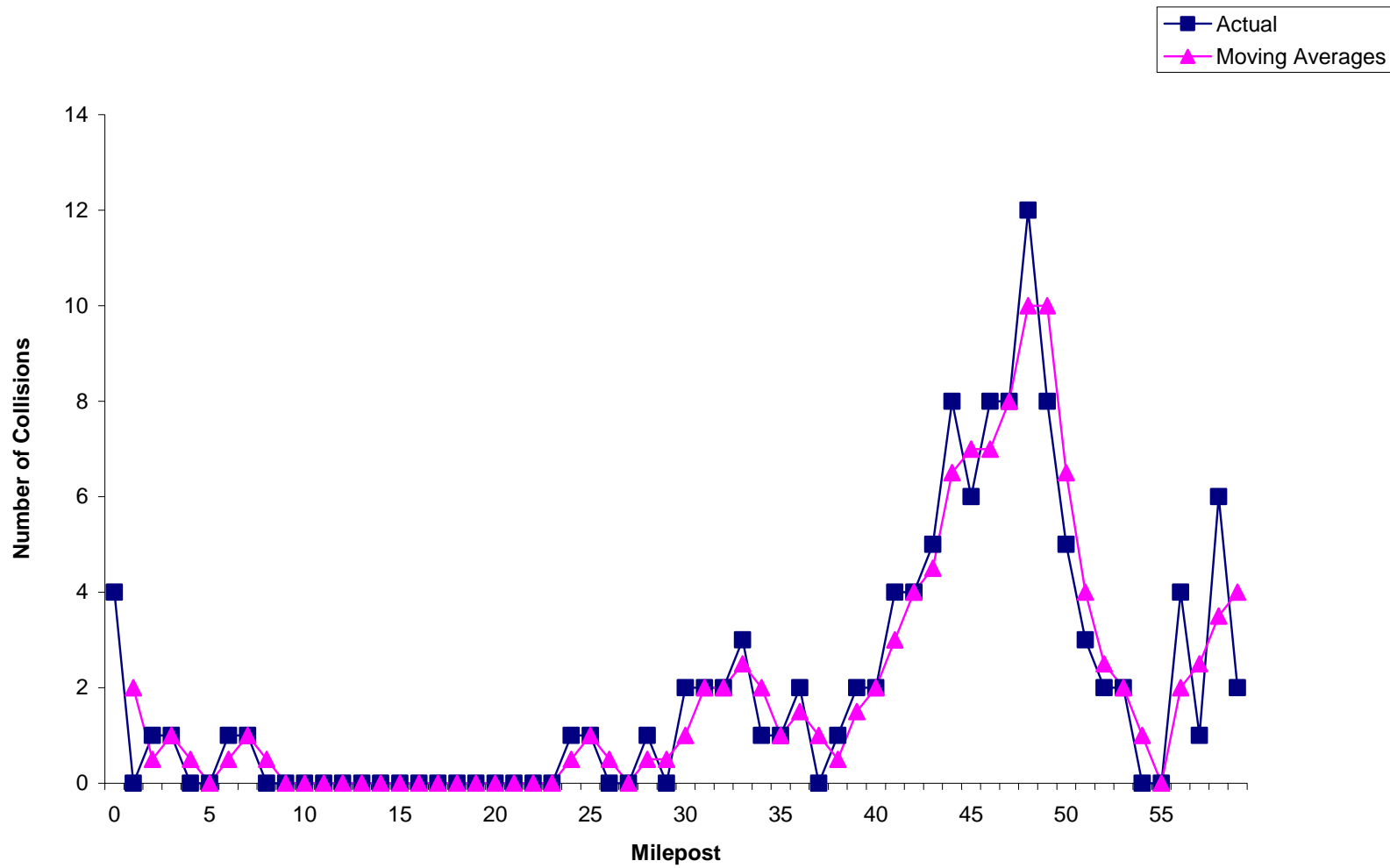


Table 17. Route 65 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 65 from 1992 through 2002. Over these 11 years there were a total of 43 deer-vehicle collisions, resulting in an overall 1.52 collisions per mile on this route. With 1.52 collisions per mile, Route 65 ranked thirty-fourth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 65 is 28.254 miles in length running from Route 80 near Mt. Dell Reservoir northeast on the Brigham Young Memorial Highway to Henefer and then northeast to Route 84.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-1	1	11	11.00	1.00

Route 65 Deer Road Mortality
(1992-2002)

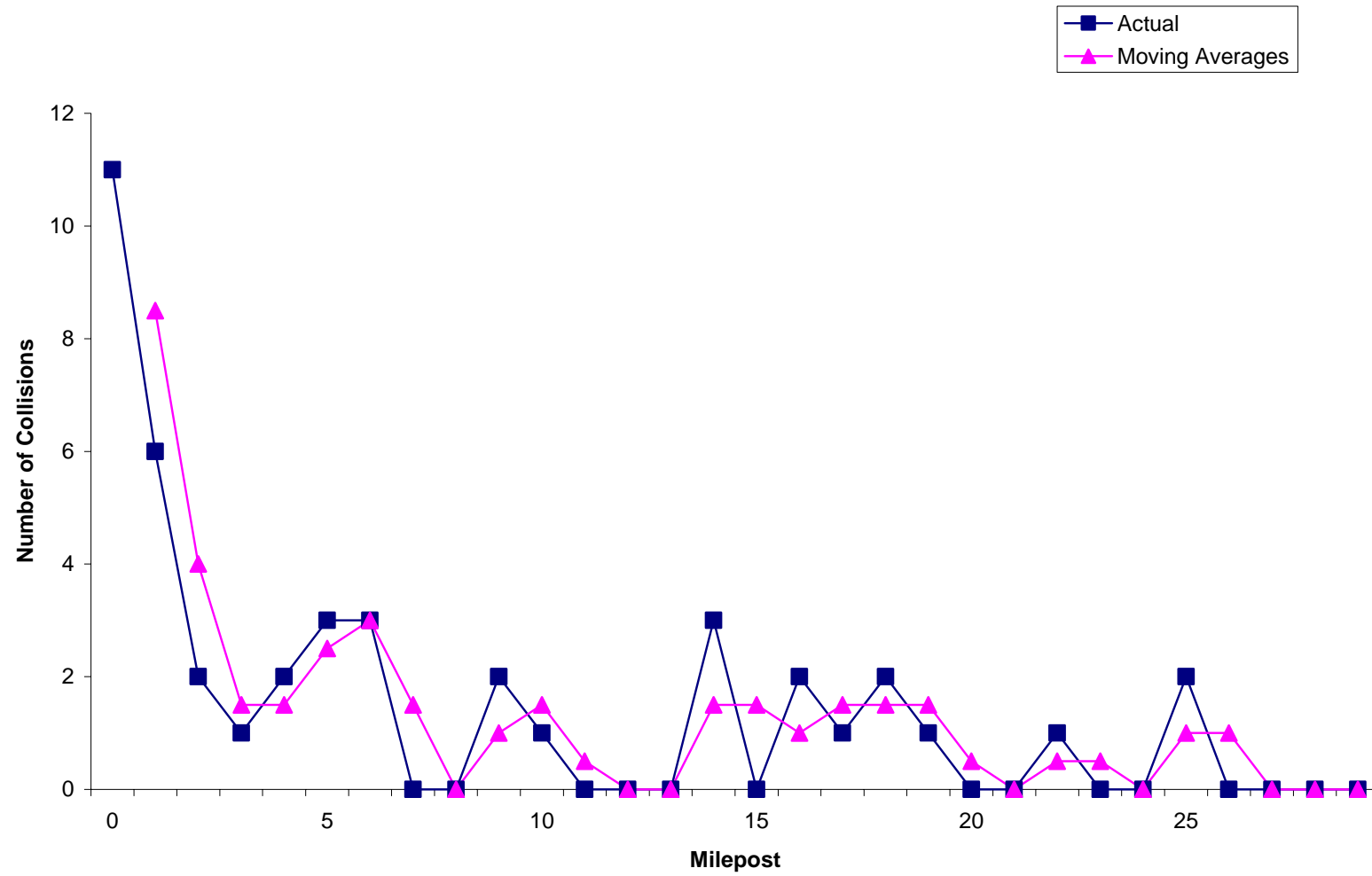


Table 18. Route 68 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 68 from 1992 through 2002. Over these 11 years there were a total of 252 deer-vehicle collisions, resulting in an overall 3.55 collisions per mile on this route. With 3.55 collisions per mile, Route 68 ranked as the twelfth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 68 is 71.082 miles in length. This route runs north from Route 6 at Elberta on Redwood Road and Fifth South Street in Bountiful and then runs south on 2nd West in Bountiful to Route 89 in Bountiful.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
34-39	6	187	31.17	2.83

Route 68 Deer Road Mortality
(1992-2002)

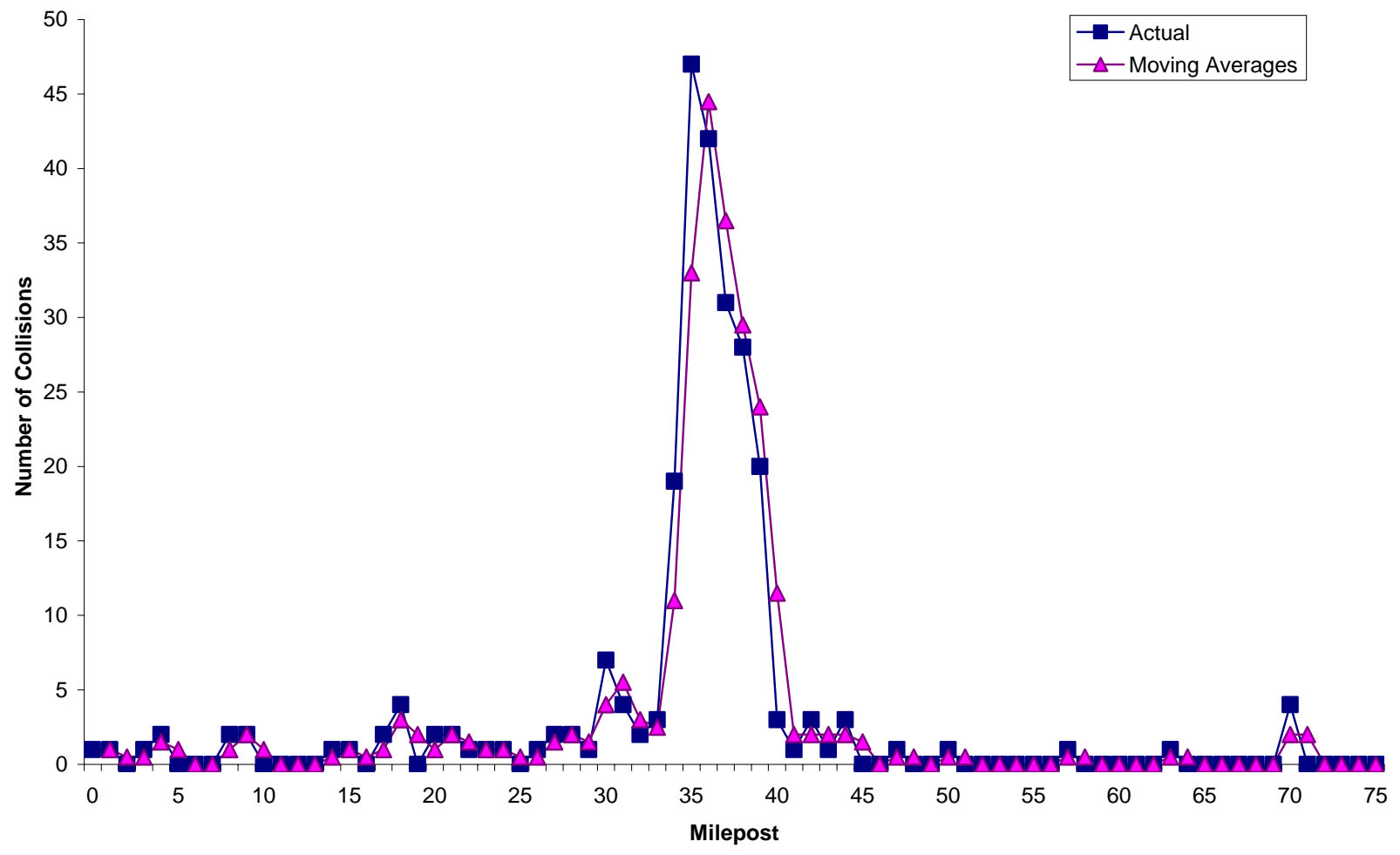


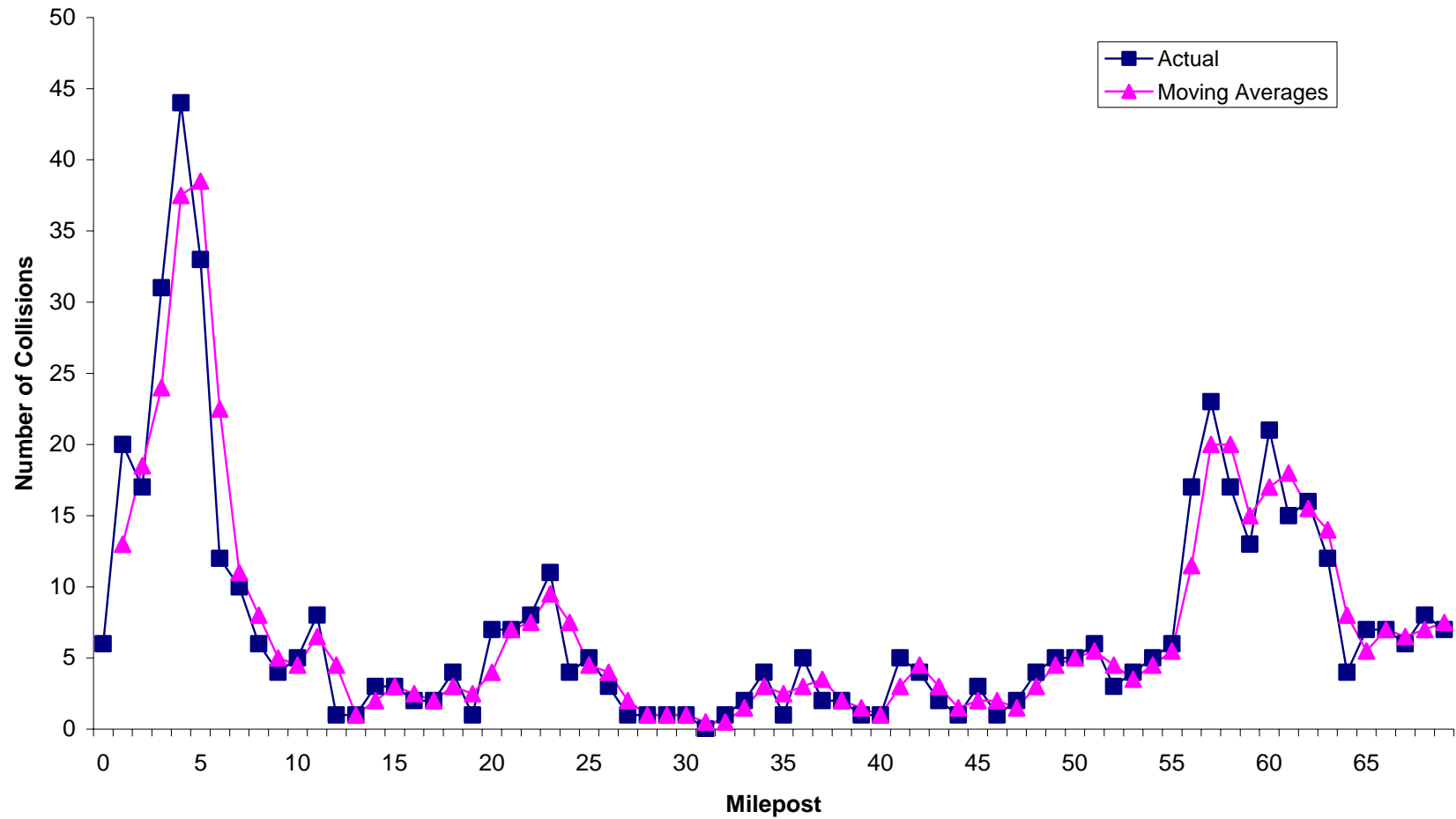
Table 19. Route 70 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 70 from 1992 through 2002. Over these 11 years there were a total of 894 deer-vehicle collisions, resulting in an overall 3.86 collisions per mile on this route. With 3.86 collisions per mile, Route 70 ranked as the ninth most dangerous long route (50 miles or more) of those analyzed in Utah.

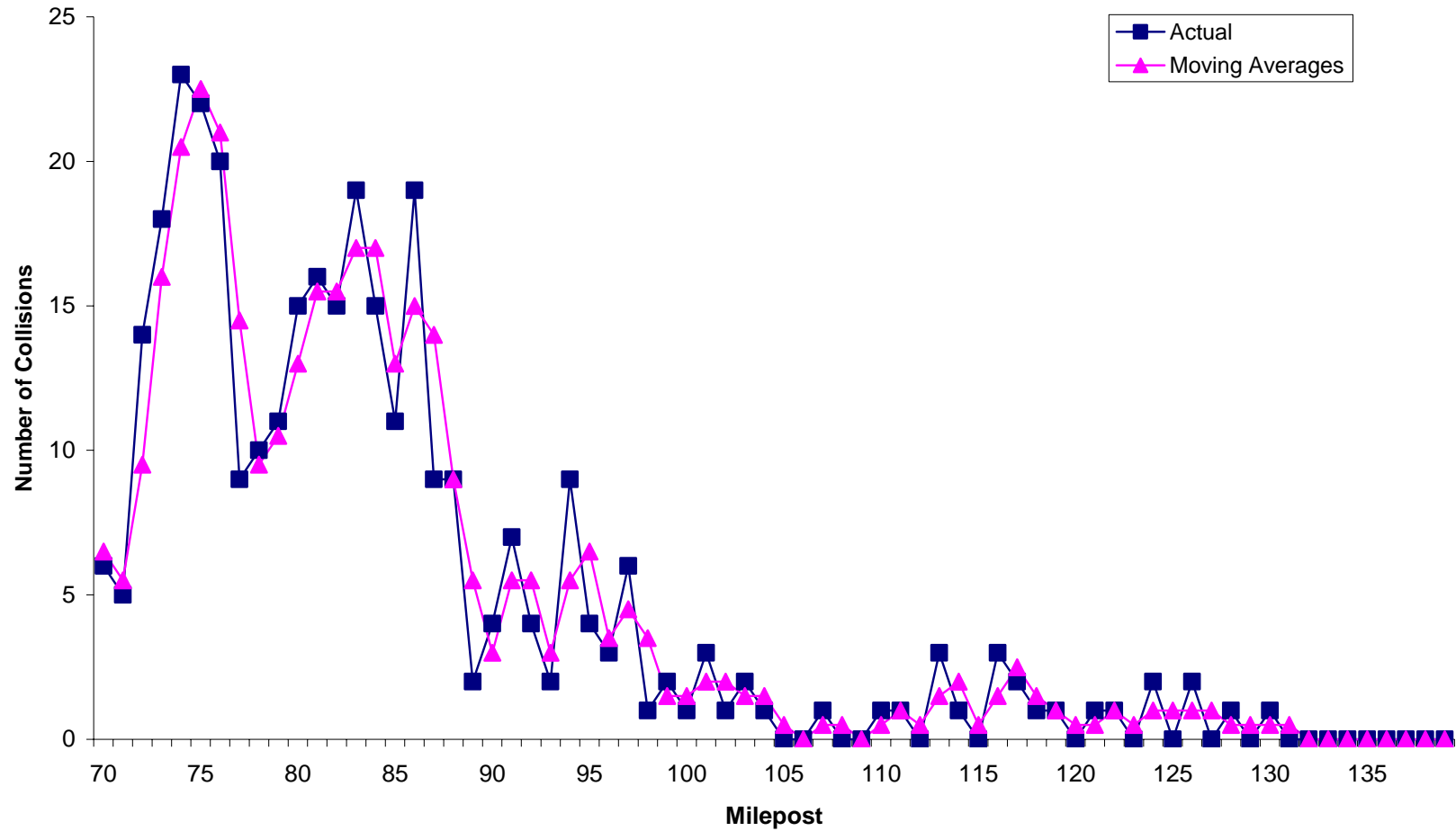
Route 70 is 231.69 miles in length running from the Cove Fort to the Utah-Colorado state line west of Grand Junction, Colorado on interstate Route 70.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
1-7	7	167	23.86	2.17
72-77	5	97	19.4	1.76
56-63	8	134	16.75	1.52
79-86	8	121	15.13	1.38
23	1	11	11	1.00

Route 70 Deer Road Mortality
Milepost 0-69
(1992-2002)



Route 70 Deer Road Mortality
Milepost 70-140
(1992-2002)



Route 70 Deer Road Mortality
Milepost 140-232
(1992-2002)

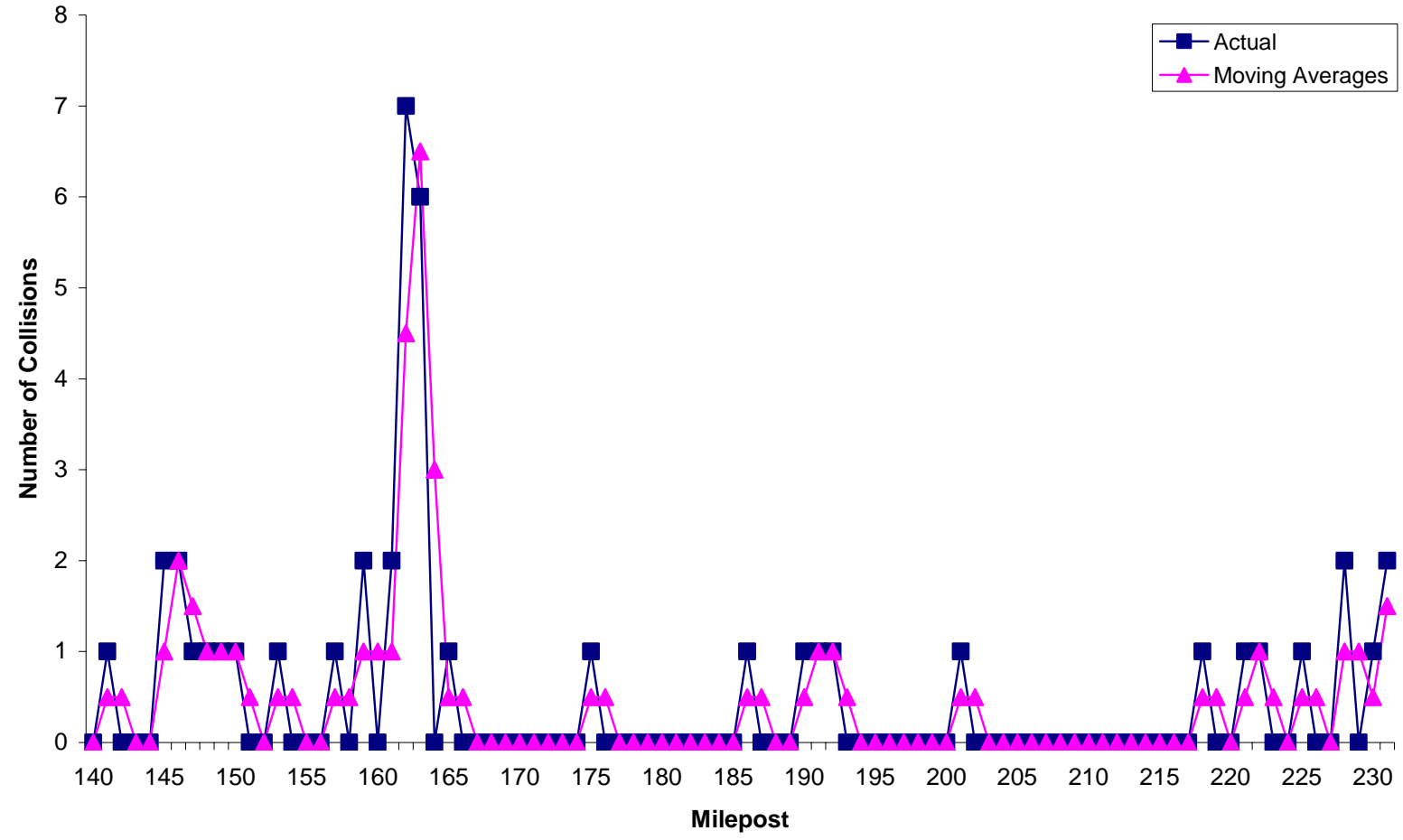


Table 20. Route 71 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 71 from 1992 through 2002. Over these 11 years there were a total of 40 deer-vehicle collisions, resulting in an overall 1.78 collisions per mile on this route. With 1.78 collisions per mile, Route 71 ranked thirty-third in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 71 is 22.47 miles in length running from Route 154 in Riverton easterly to Seventh East Street in Draper, then northerly on Seventh East and Ninth East Streets to Route 186 at Seventh East Street and Fourth South Street in Salt Lake City.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
3	1	19	19.00	1.73

Route 71 Deer Road Mortality
(1992-2002)

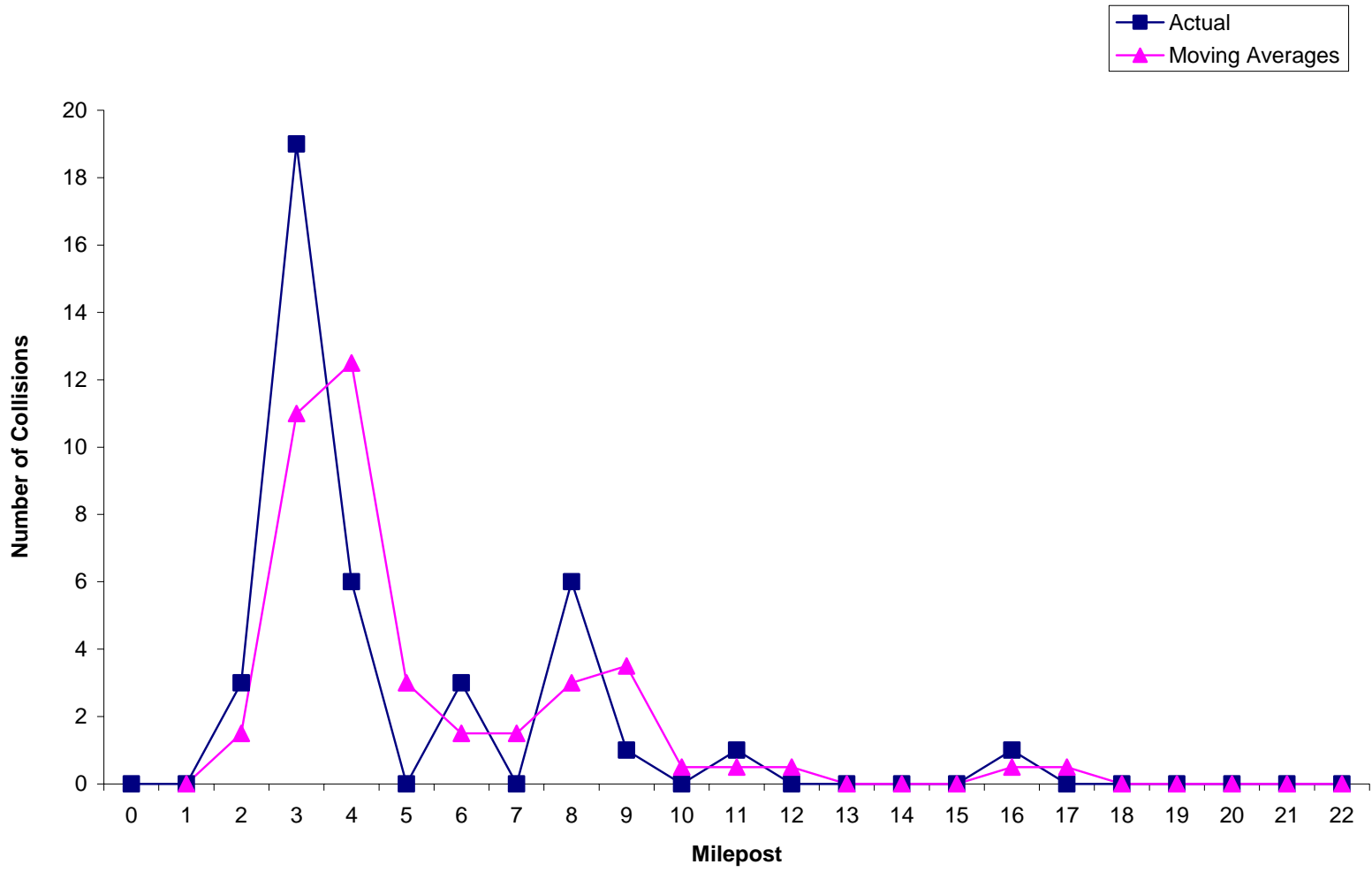


Table 21. Route 73 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 73 from 1992 through 2002. Over these 11 years there were a total of 237 deer-vehicle collisions, resulting in an overall 5.75 collisions per mile on this route. With 5.75 collisions per mile, Route 73 ranked twentieth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 73 is 41.201 miles in length running from Route 36 northeast of St. John Station on Five Mile Pass and then going northeast to Route 89 in Lehi.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
24-27	4	77	19.25	1.75
30-31	2	32	16.00	1.45
34	1	12	12.00	1.09

Route 73 Deer Road Mortality
(1992-2002)

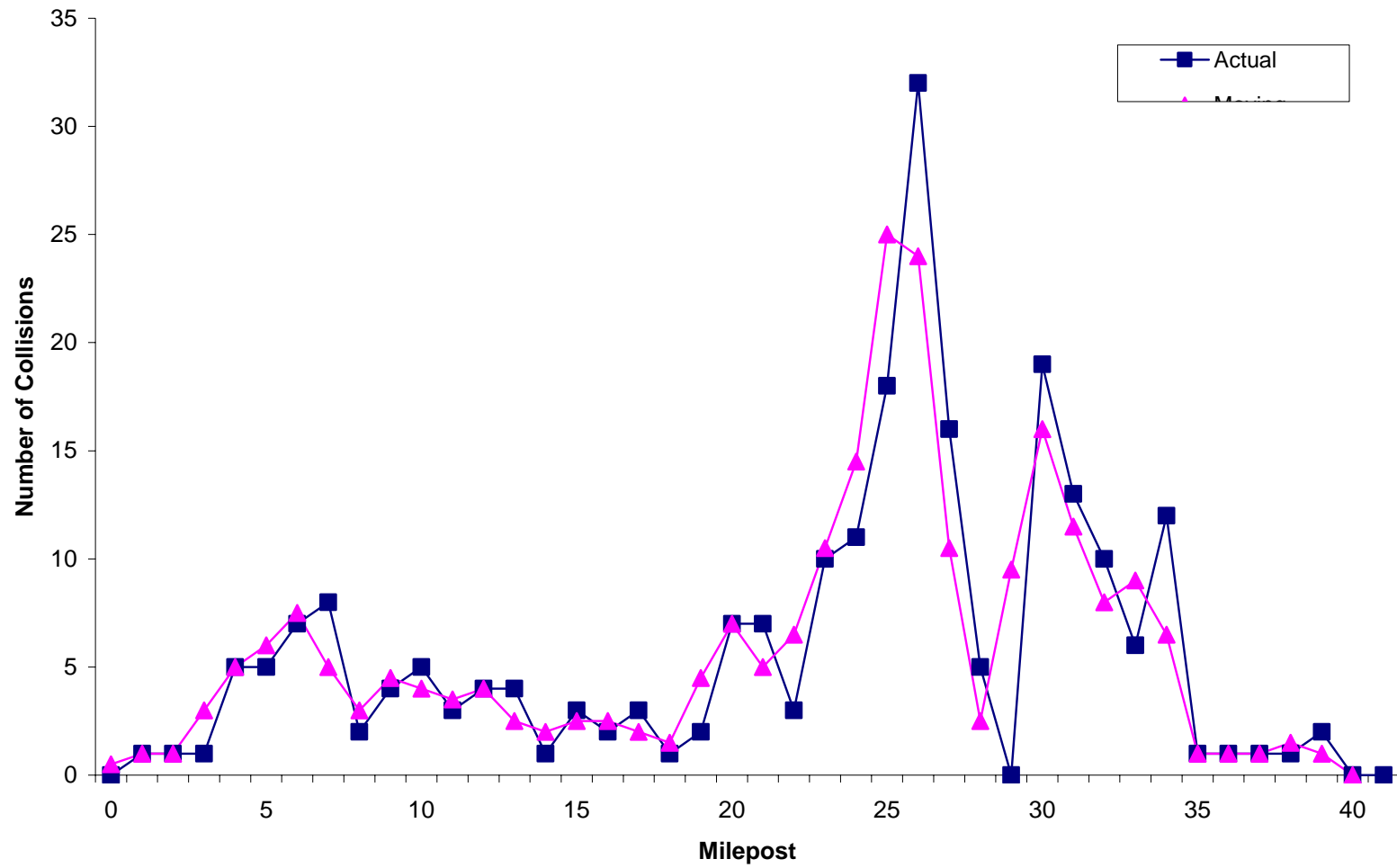


Table 22. Route 74 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 74 from 1992 through 2002. Over these 11 years there were a total of 28 deer-vehicle collisions, resulting in an overall 4.92 collisions per mile on this route. With 4.92 collisions per mile, Route 74 ranked twenty-first in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 74 is 5.687 miles in length running from Route 89 in American Fork north to Alpine.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
4	1	14	14.00	1.27

Route 74 Deer Road Mortality
(1992-2002)

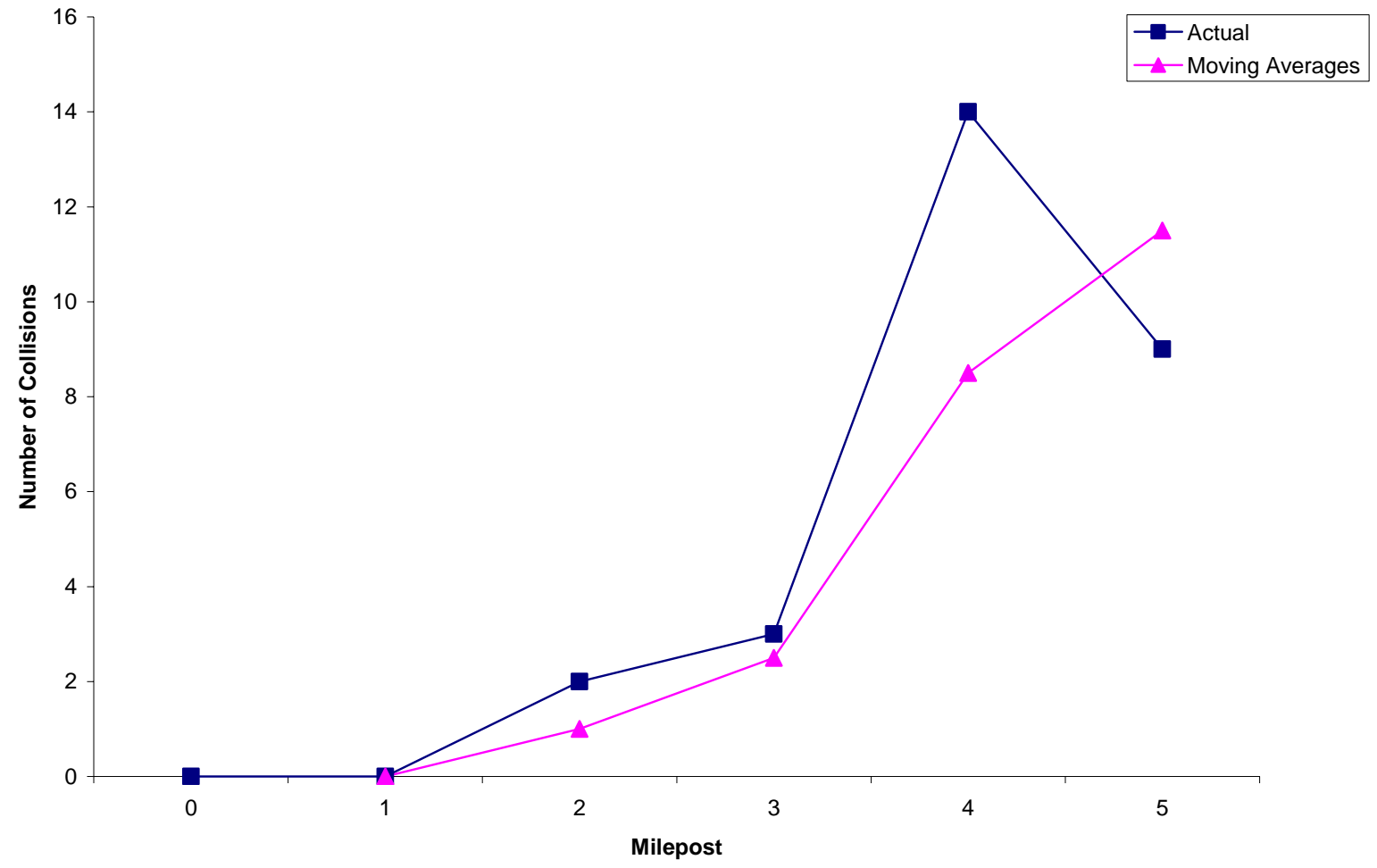
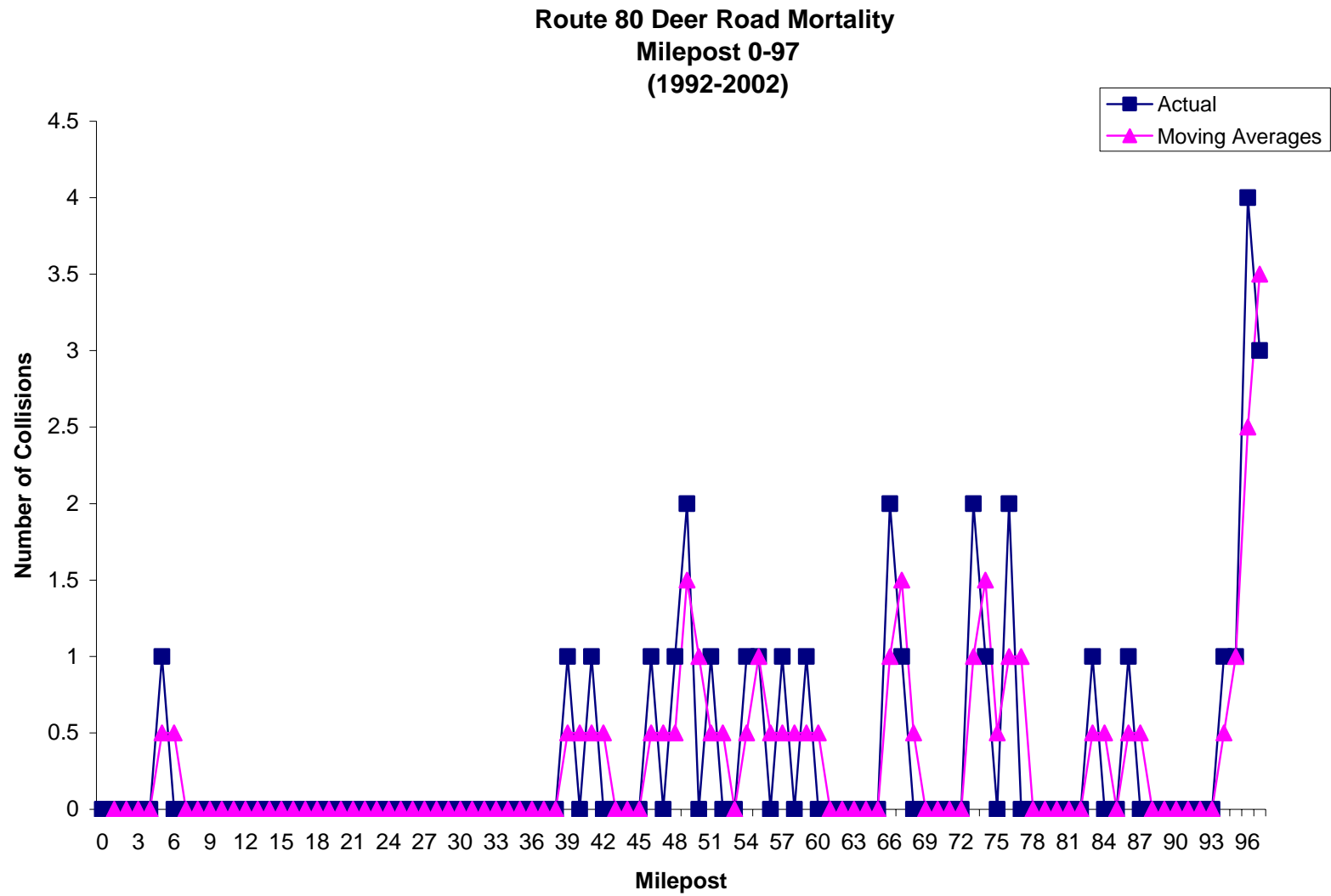


Table 23. Route 80 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 80 from 1992 through 2002. Over these 11 years there were a total of 938 deer-vehicle collisions, resulting in an overall 4.84 collisions per mile on this route. With 4.84 collisions per mile, Route 80 ranked as the seventh most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 80 is 193.86 miles in length running from the Utah-Nevada state line in Wendover to the Utah-Wyoming state line west of Evanston, Wyoming, on Interstate 80.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
131-143	13	340	26.15	2.38
123-124	1	23	23	2.091
151-154	4	83	20.75	1.86
163-167	5	86	17.2	1.56
159	1	14	14	1.27
99	1	13	13	1.18
126	1	12	12	1.09
150	1	11	11	1



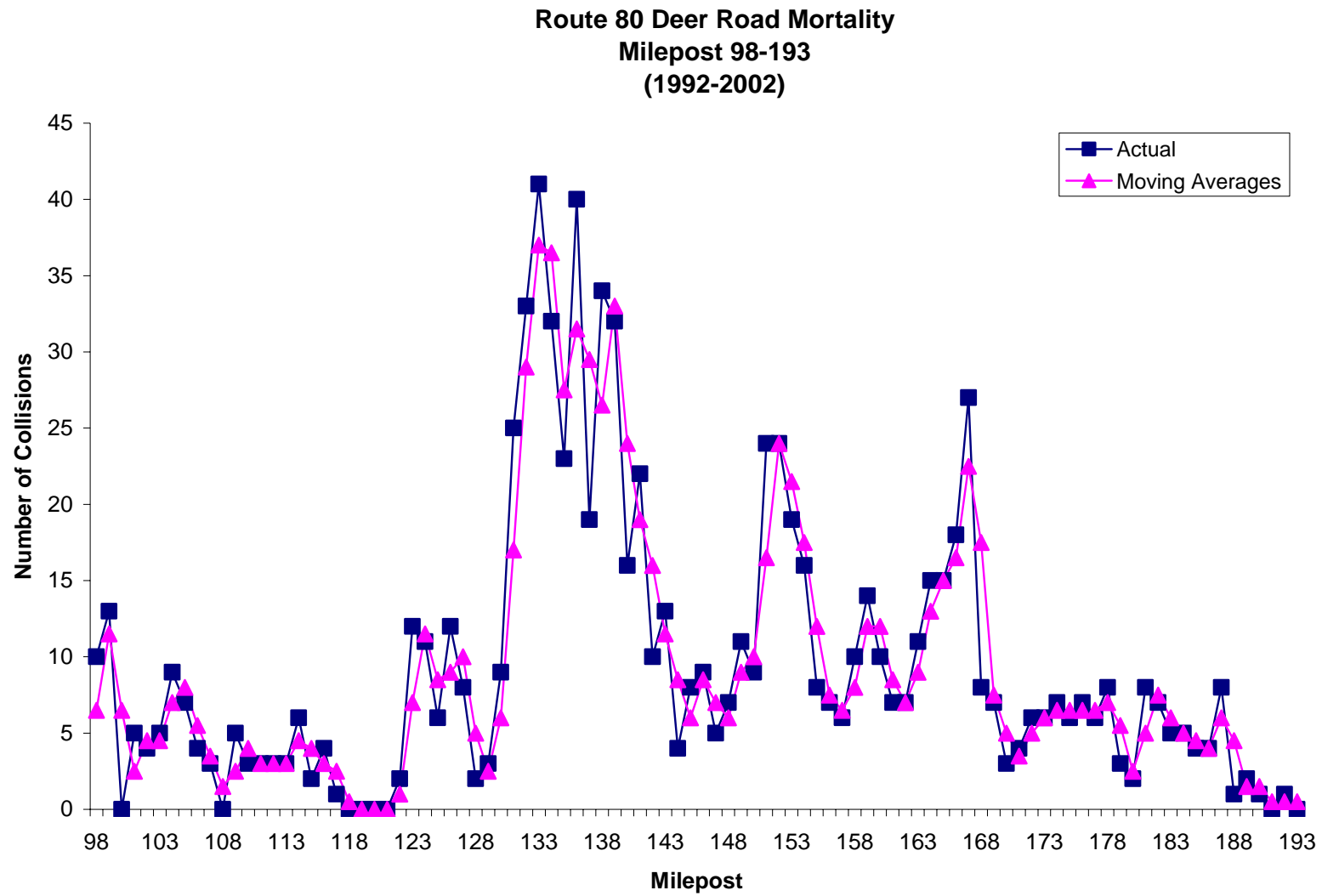


Table 24. Route 84 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 84 from 1992 through 2002. Over these 11 years there were a total of 459 deer-vehicle collisions, resulting in an overall 5.68 collisions per mile on this route. With 5.68 collisions per mile, Route 84 ranked as the third most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 84 is 80.846 miles in length running from the Utah-Idaho state line near Snowville to a point on Route 15 at the Tremonton Interchange; then from another point on Route 15 near Roy to Route 80 near Echo, traversing the alignment of interstate Route 84.

I

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
45	1	20	20.00	1.82
16	1	14	14.00	1.27
3	1	12	12.00	1.09
6	1	12	12.00	1.09
78-79	2	23	11.50	1.05
54	1	11	11.00	1.00

Route 84 Deer Road Mortality
(1992-2002)

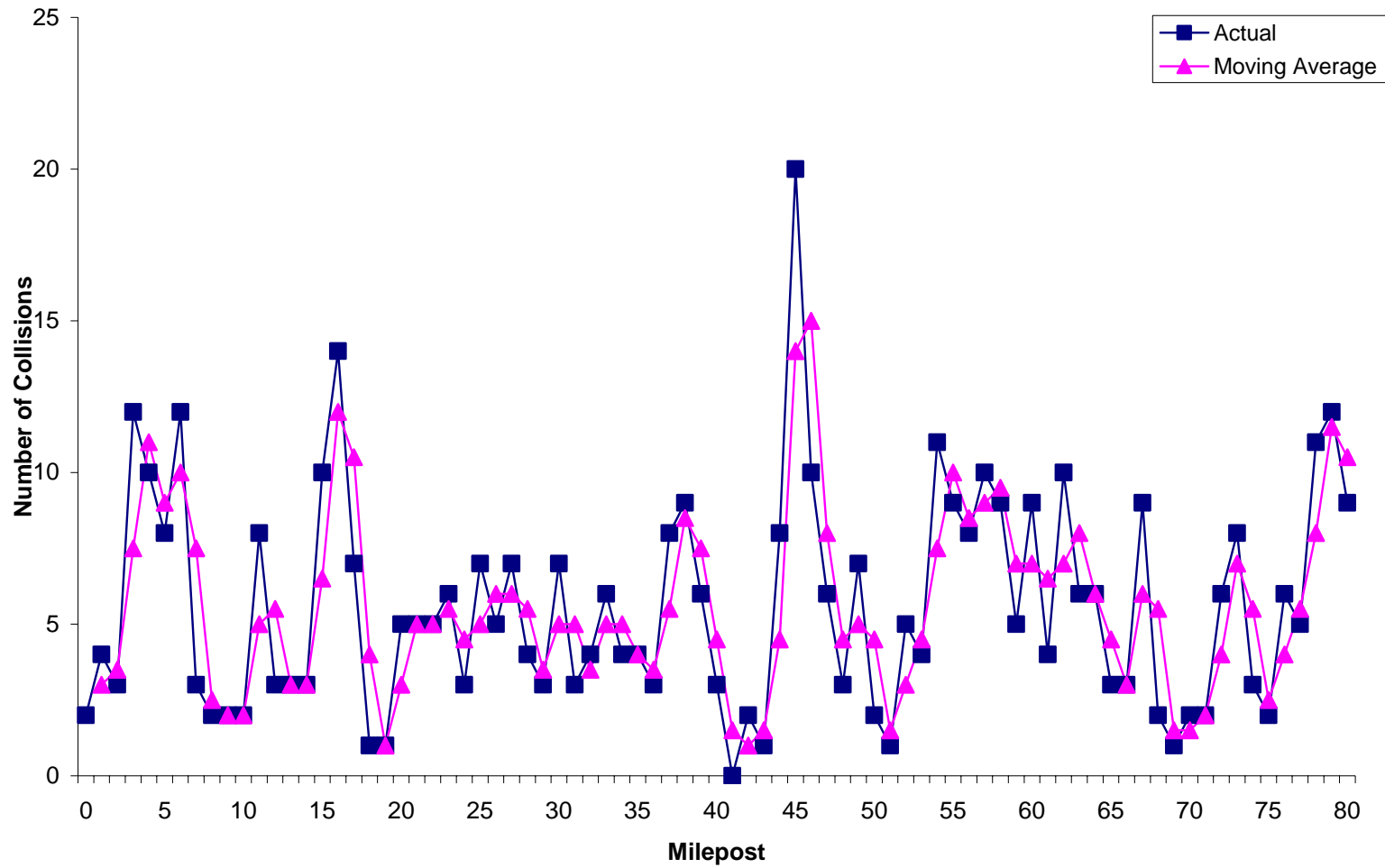
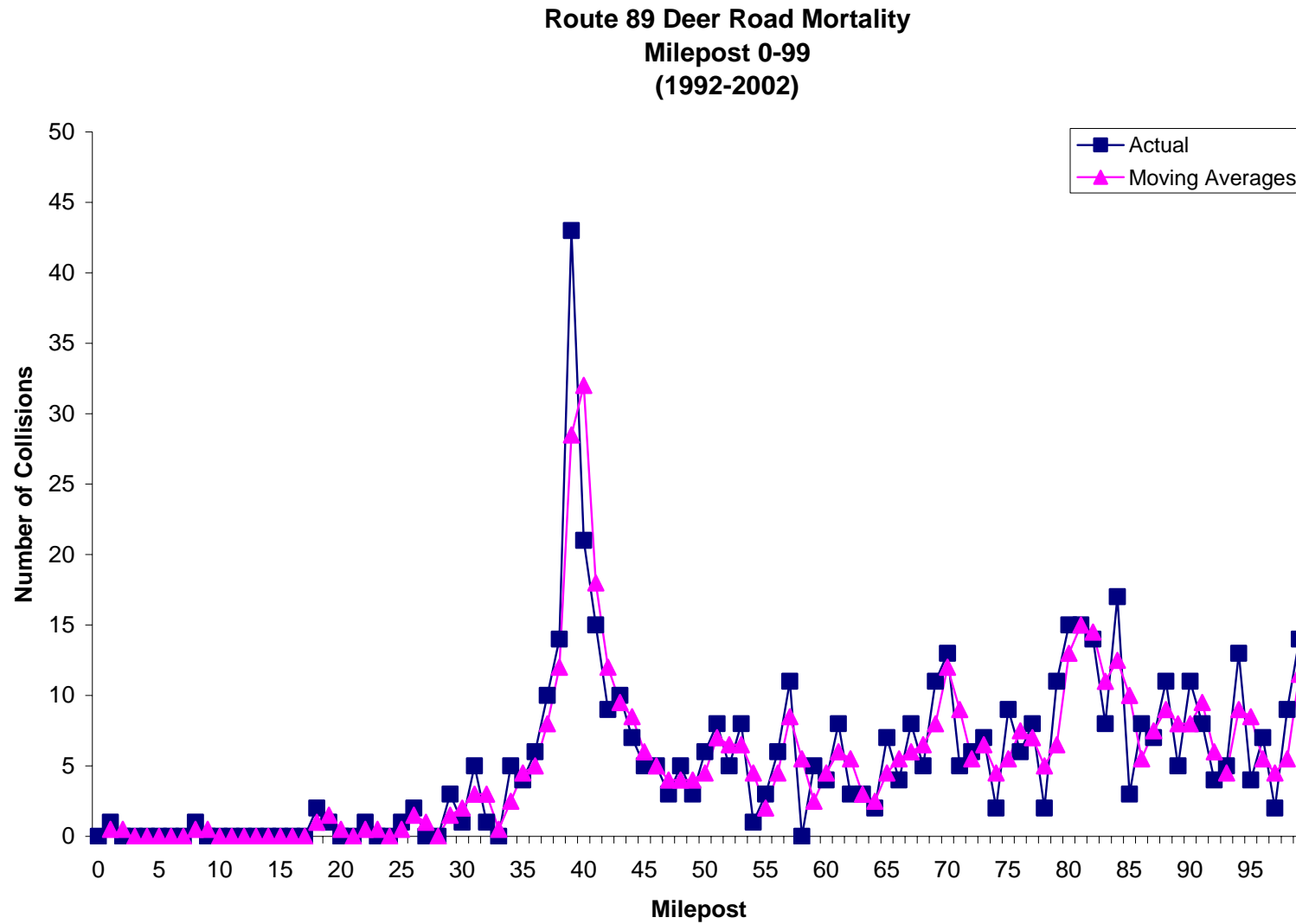


Table 25. Route 89 Hotspots (1992-2002)

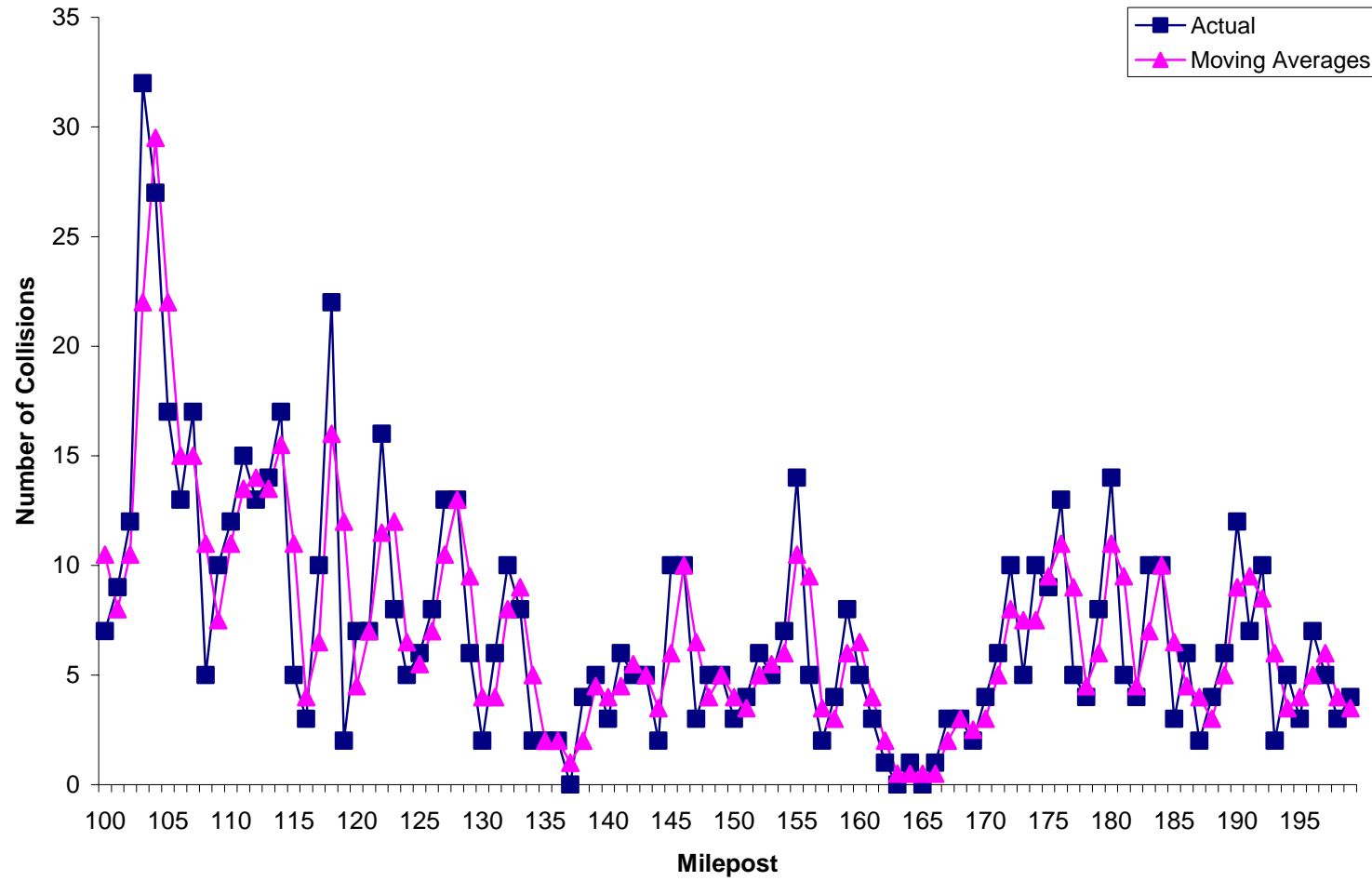
This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 89 from 1992 through 2002. Over these 11 years there were a total of 3360 deer-vehicle collisions, resulting in an overall 8.04 collisions per mile on this route. With 8.04 collisions per mile, Route 89 ranked as the most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 89 is 417.759 miles in length running from the Utah-Arizona state line northwest of Page, Arizona, westerly to Kanab; then northerly to a junction with Route 70 near Sevier Junction; then beginning again at the junction with Route 70 south of Salina, northerly through Salina, Gunnison and Mt. Pleasant to a junction with Route 6 at Thistle Junction; beginning again at junction with Route 6 at Moark Junction northerly through Springville, Provo, Orem, and American Fork to Route 15 north of Lehi; then beginning again at a junction with Route 15 near Draper Crossroads northerly via Murray and Salt Lake City to a junction with Route 15 at Beck Interchange; then beginning again at a junction with Route 15 near Orchard Drive northerly through Bountiful to a junction with Route 15 at North Bountiful Interchange; then beginning again at a junction with Route 15 at Lagoon Junction northerly through Uintah Junction and Ogden to Route 91 near south city limits of Brigham City; then beginning again at a junction with Route 81 in Logan northeasterly to Garden City; then north to the Utah-Idaho state line.

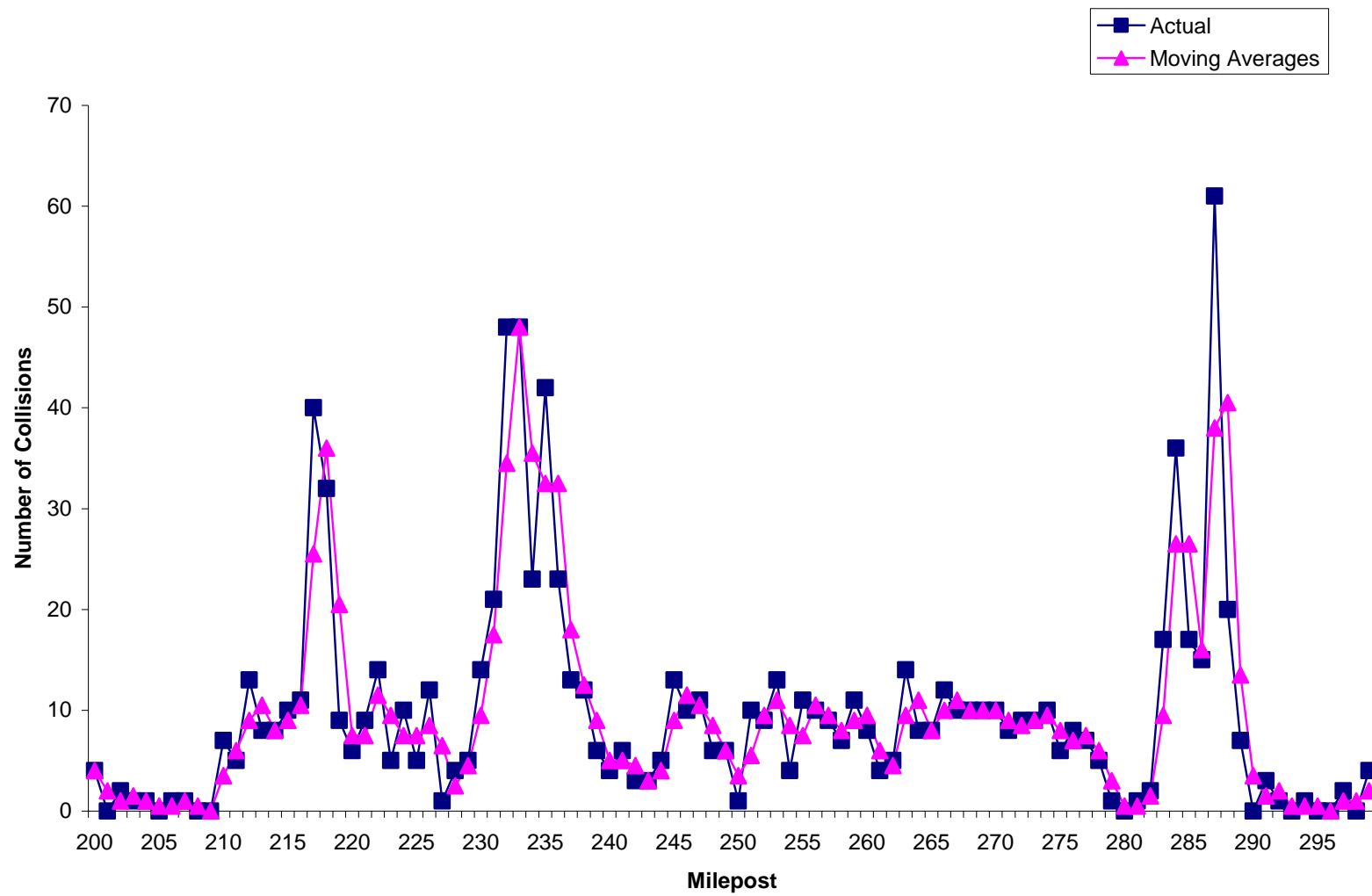
Location of Hotspot	Total HotspotMileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
336-348	13	453	34.85	3.17
231-236	6	205	34.17	3.11
362-373	12	356	29.67	2.70
283-288	6	166	27.67	2.52
216-218	3	83	27.67	2.52
38-42	4	93	23.25	2.11
102-107	6	118	19.67	1.79
394-396	3	51	17.00	1.55
109-114	6	81	13.50	1.23
79-84	6	80	13.33	1.21
127-128	2	26	13.00	1.18
69-70	2	24	12.00	1.09
245-247	3	34	11.33	1.03
118	1	22	22.00	2.00
155	1	14	14.00	1.27
180	1	14	14.00	1.27
222	1	14	14.00	1.27
263	1	14	14.00	1.27
375	1	14	14.00	1.27
334	1	14	14.00	1.27
122	1	14	14.00	1.27
94	1	13	13.00	1.18
176	1	13	13.00	1.18
212	1	13	13.00	1.18
253	1	13	13.00	1.18
102	1	12	12.00	1.09
190	1	12	12.00	1.09
226	1	12	12.00	1.09
238	1	12	12.00	1.09
266	1	12	12.00	1.09
57	1	11	11.00	1.00
88	1	11	11.00	1.00
90	1	11	11.00	1.00
255	1	11	11.00	1.00
259	1	11	11.00	1.00



Route 89 Deer Road Mortality
Milepost 100-199
(1992-2002)



Route 89 Deer Road Mortality Milepost 200-299 (1992-2002)



Route 89 Deer Road Mortality
Milepost 300-417
(1992-2002)

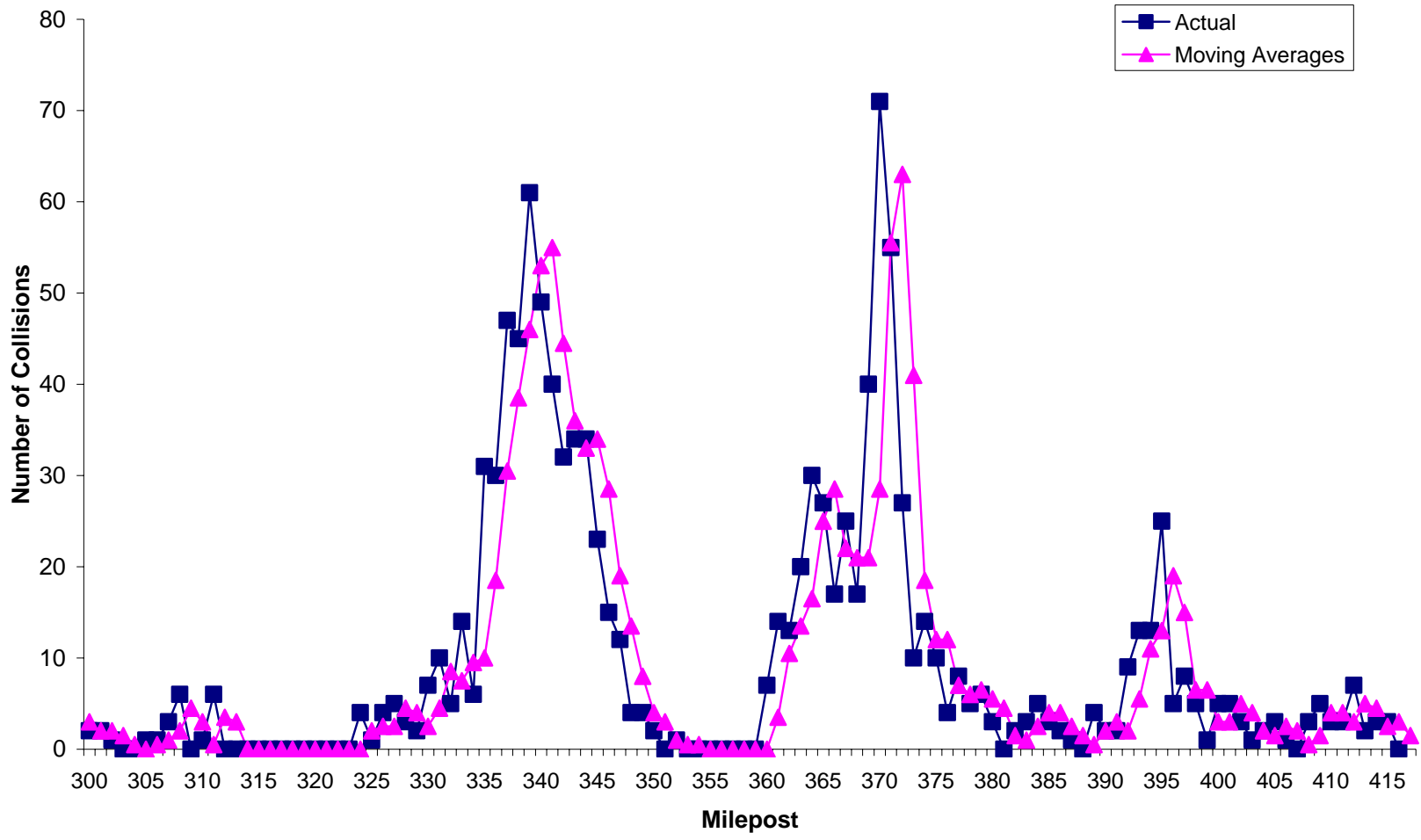


Table 26. Route 91 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 91 from 1992 through 2002. Over these 11 years there were a total of 584 deer-vehicle collisions, resulting in an overall 12.81 collisions per mile on this route. With 12.81 collisions per mile, Route 91 ranked seventh in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 91 is 45.591 miles in length beginning at Route 15 south of Brigham City and running east through Brigham Canyon and Logan to the Utah-Idaho state line near Franklin, Idaho.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
37	1	33	33.00	3.00
3-10	8	236	29.50	2.68
25	1	27	27.00	2.45
41-42	2	46	23.00	2.09
14-16	3	62	20.67	1.88
12	1	12	12.00	1.09
35	1	12	12.00	1.09
19	1	11	11.00	1.00

Route 91 Deer Road Mortality
(1992-2002)

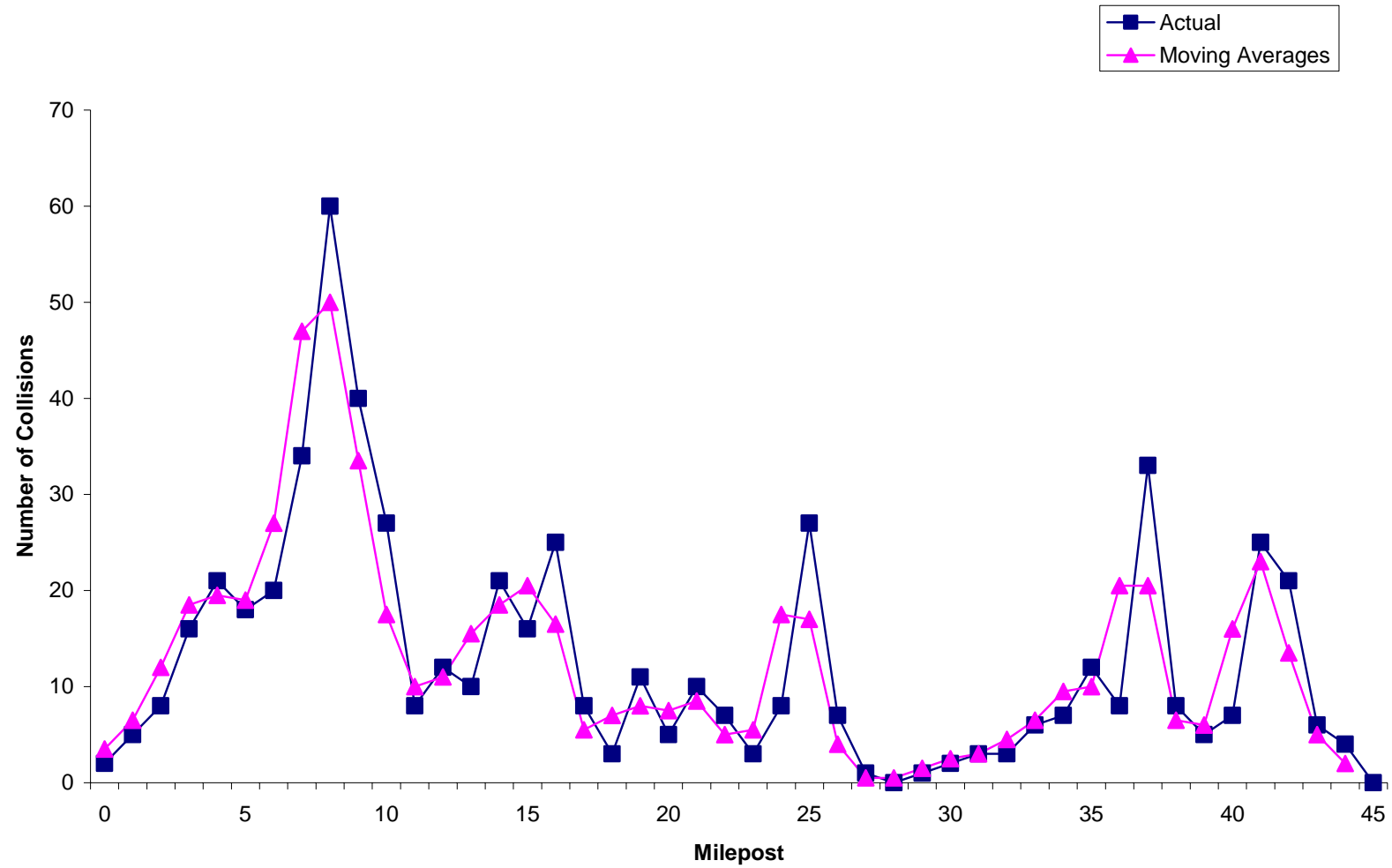


Table 27. Route 92 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by accidents per mile, for Route 92 from 1992 through 2002. Over these 11 years there were a total of 247 deer-vehicle collisions, resulting in an overall 9.07 accidents per mile on this route. With 9.07 accidents per mile, Route 92 ranked twelfth in accidents per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 92 is 27.234 miles in length running from Route 15 near Point of the Mountain east through American Fork Canyon to Route 189 in Provo Canyon.

Location of Hotspot	Total Hotspot Mileage	Accidents within Hotspot	Hotspot Accidents/Mile	Hotspot Accidents/Mile/Year
0-4	5	204	40.80	3.71
6	1	14	14.00	1.27

Route 92 Deer Road Mortality
(1992-2002)

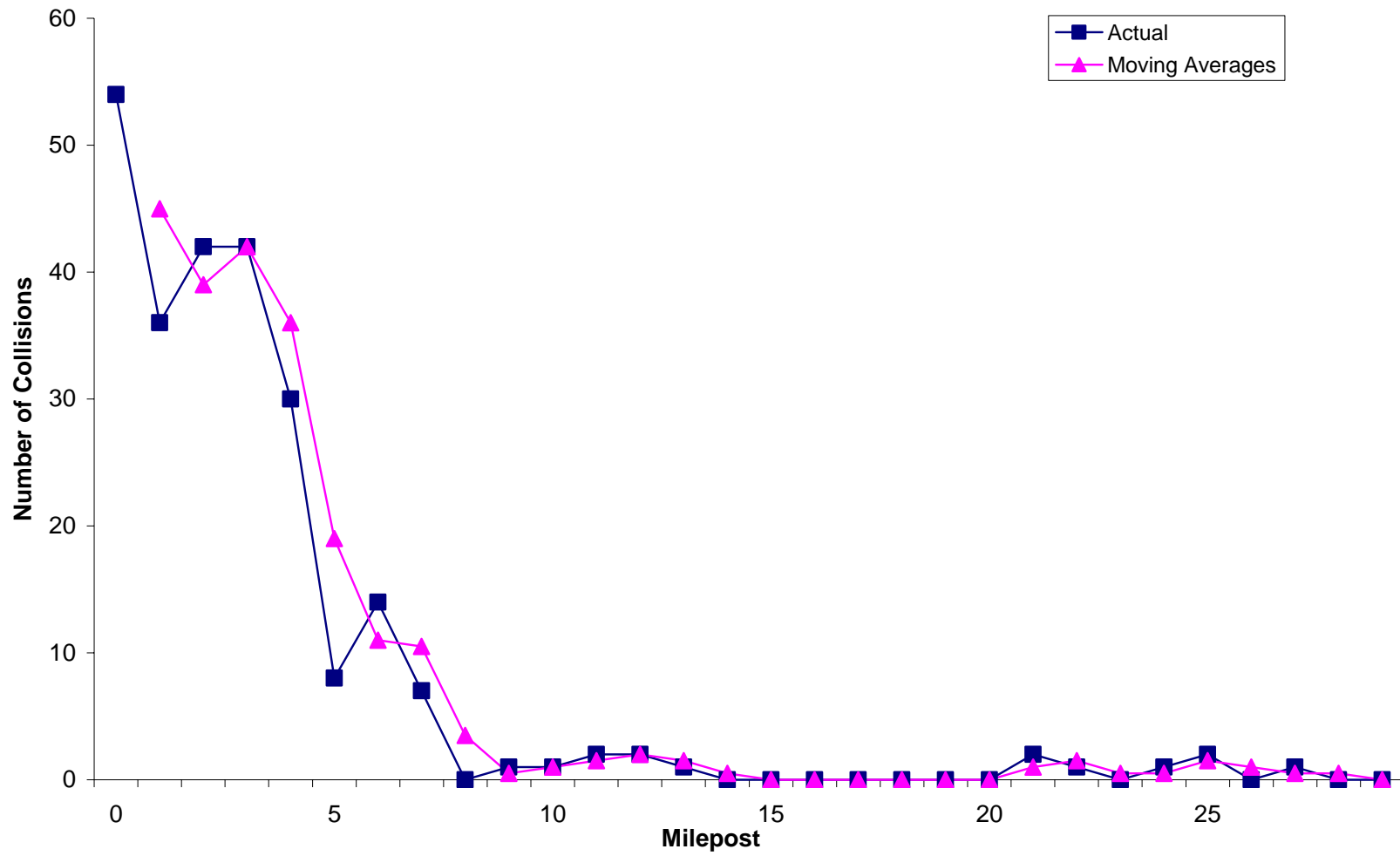


Table 28. Route 99 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 99 from 1992 through 2002. Over these 11 years there were a total of 54 deer-vehicle collisions, resulting in an overall 12.87 collisions per mile on this route. With 12.87 collisions per mile, Route 99 ranked sixth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 99 is 4.195 miles in length running from Route 15 south of Fillmore north through Fillmore to Route 15.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
2-3	2	35	17.50	1.59

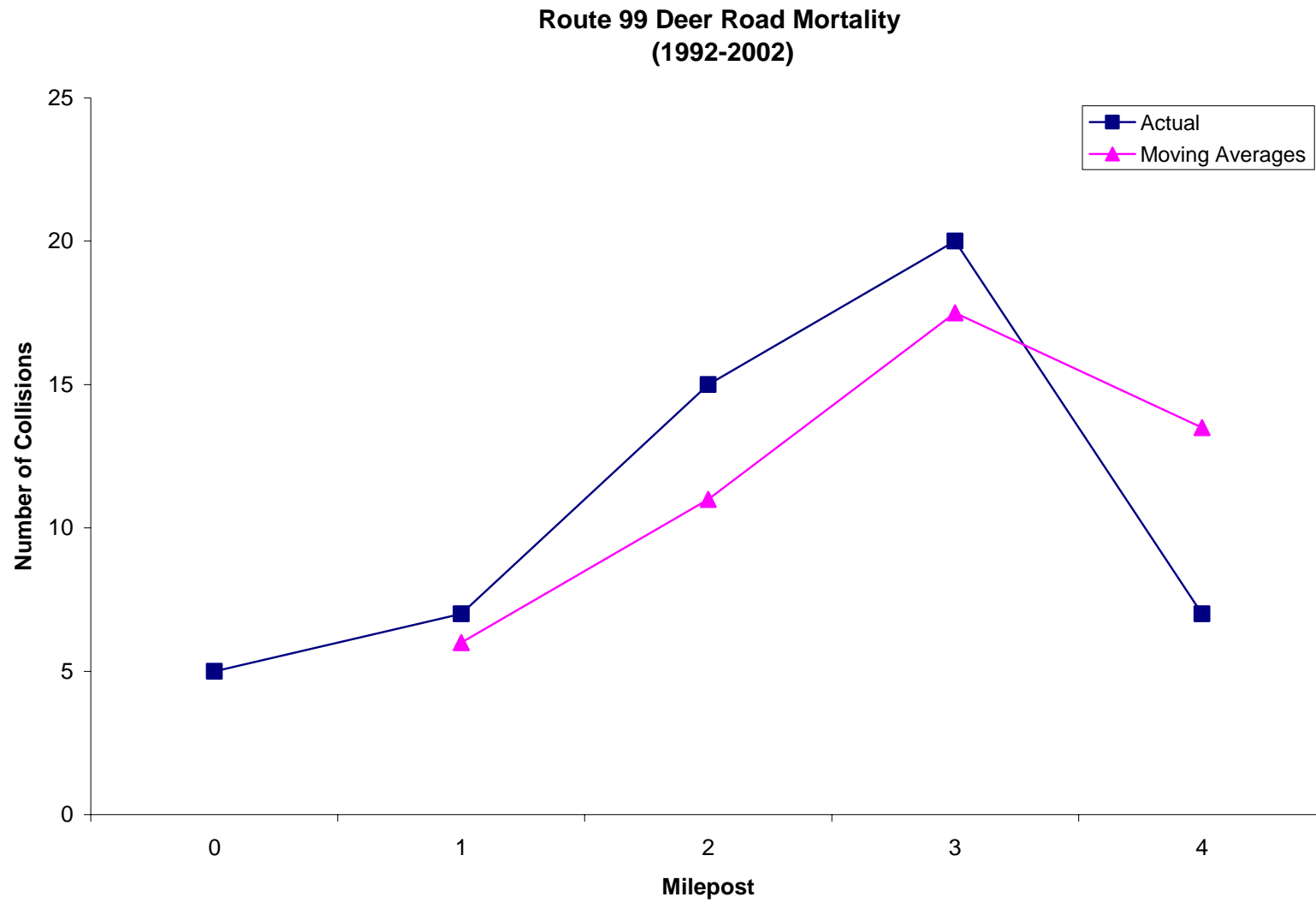


Table 29. Route 106 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 106 from 1992 through 2002. Over these 11 years there were a total of 84 deer-vehicle collisions, resulting in an overall 8.92 collisions per mile on this route. With 8.92 collisions per mile, Route 106 ranked thirteenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 106 is 9.416 miles in length beginning .21 miles west of Route 15 and runs east on 400 North Street in Bountiful. It turns north to Sheppard Lane in Farmington and runs west on Sheppard Lane to Route 89.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
4-6	3	45	15.00	1.36

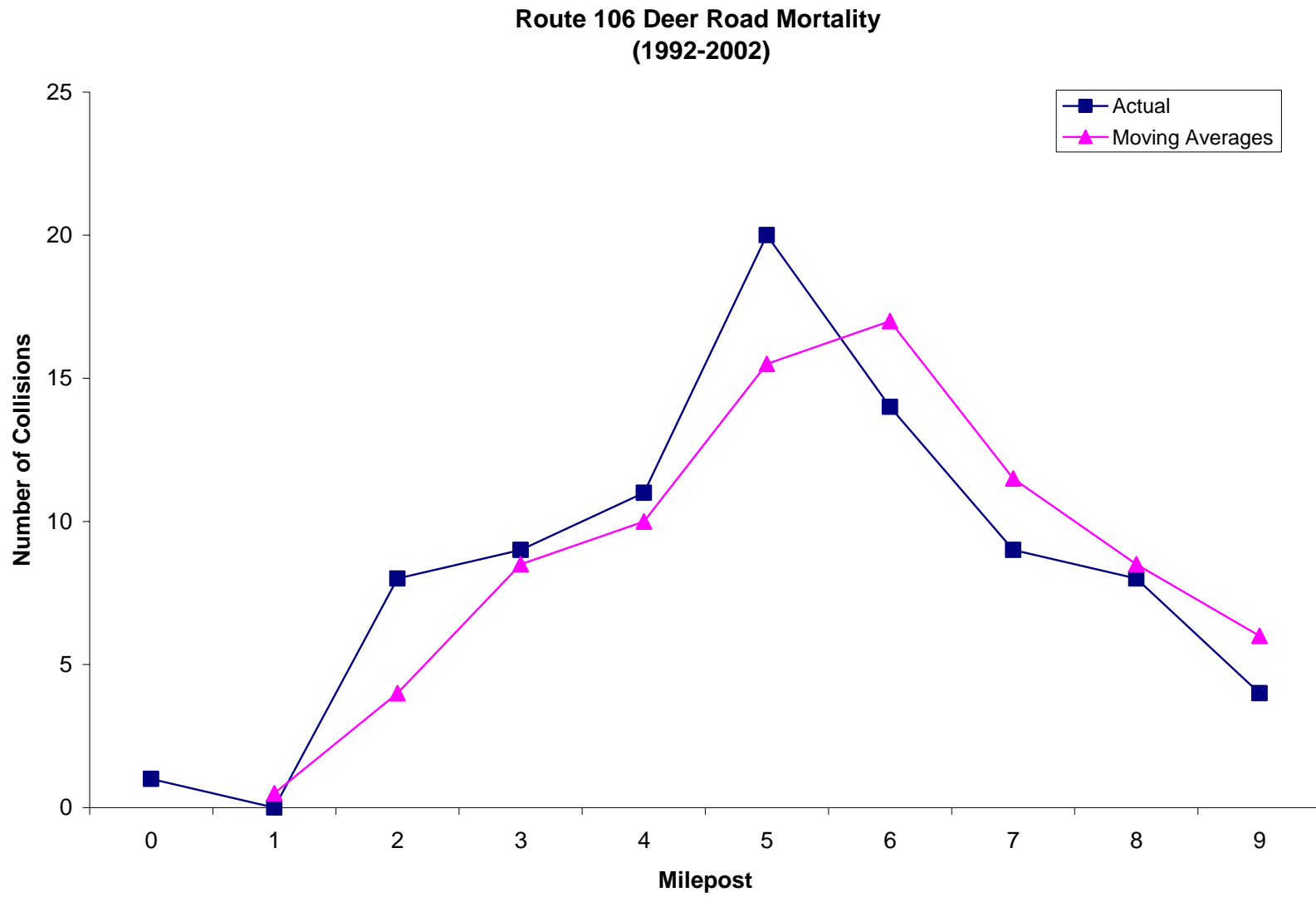


Table 30. Route 109 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 109 from 1992 through 2002. Over these 11 years there were a total of 22 deer-vehicle collisions, resulting in an overall 7.44 collisions per mile on this route. With 7.44 collisions per mile, Route 109 ranked seventeenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 109 is 2.958 miles long and runs from the I-15 north bound on and off ramps at the Hill Field South Gate Interchange in Layton west to Syracuse and then north into Weber County until it intersects with Route 126.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
2-3	1	14	14.00	1.27

Route 109 Deer Road Mortality (1992-2002)

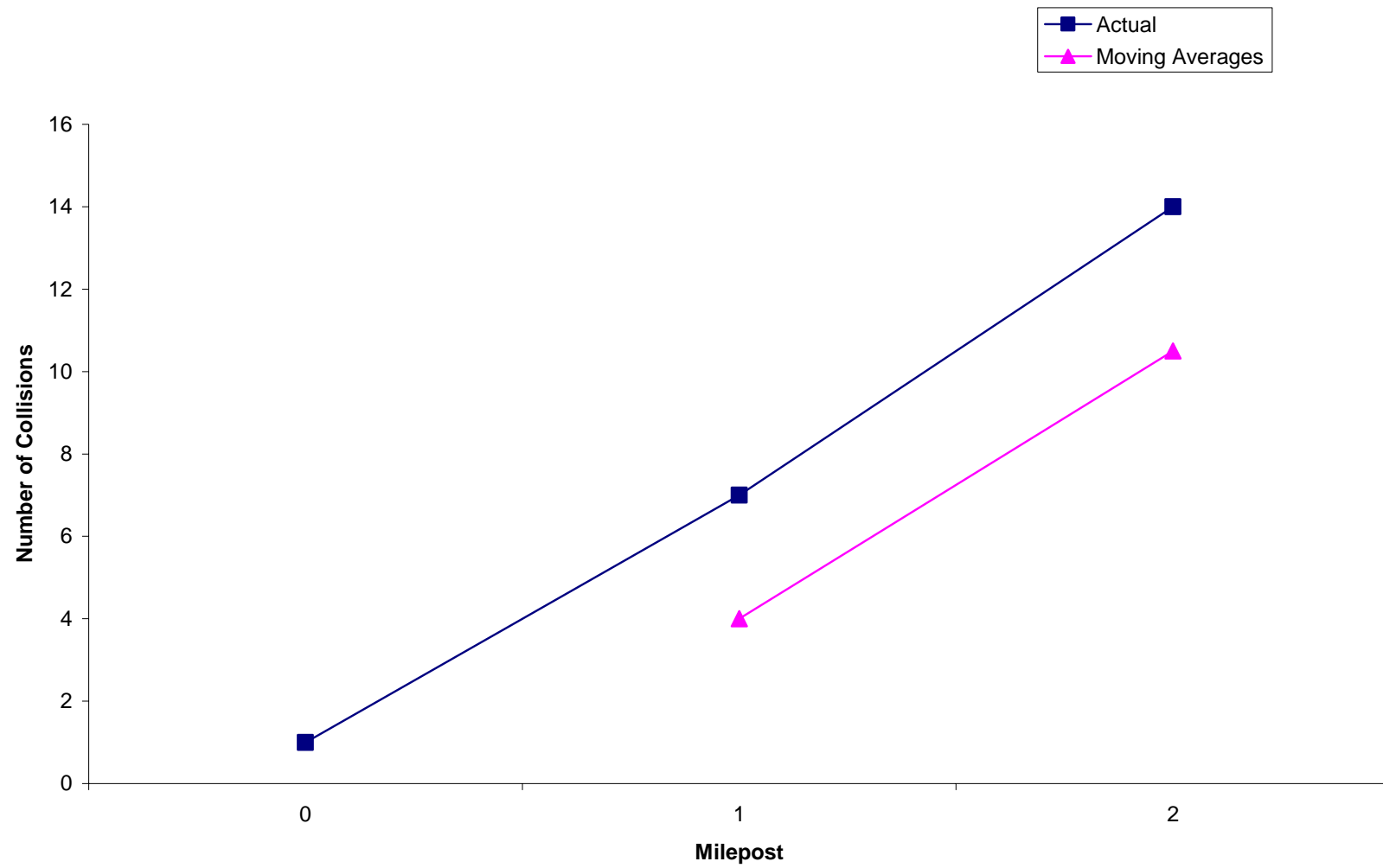


Table 31. Route 111 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 111 from 1992 through 2002. Over these 11 years there were a total of 187 deer-vehicle collisions, resulting in an overall 17.66 collisions per mile on this route. With 17.66 collisions per mile, Route 111 ranked third in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 111 is 10.591 miles in length running north from Route 48 east of Copperton through Bacchus to Route 201 northeast of Magna.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
4-8	5	142	28.40	2.58
2	1	16	16.00	1.45
0	1	12	12.00	1.09

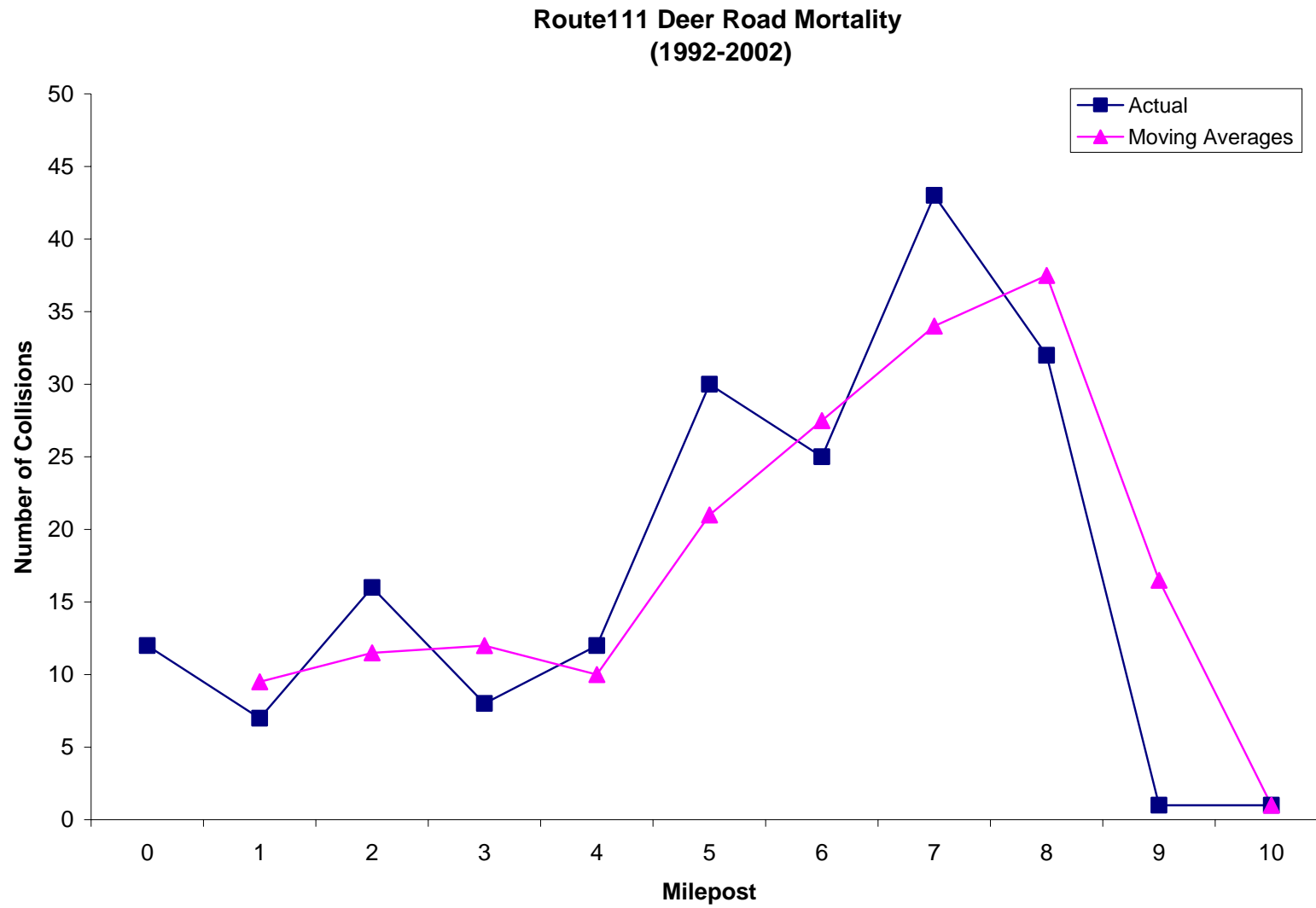


Table 32. Route 118 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 118 from 1992 through 2002. Over these 11 years there were a total of 118 deer-vehicle collisions, resulting in an overall 4.88 collisions per mile on this route. With 4.88 collisions per mile, Route 118 ranked twenty-fourth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 118 is 24.173 miles in length running east from Route 70 through Joseph and Monroe and then north to Route 120 in south Richfield. This route begins again with Route 120 at 300 North in Richfield and runs northeast to Route 24 near Sigurd.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
6-8	3	62	20.67	1.88

Route 118 Deer Road Mortality
(1992-2002)

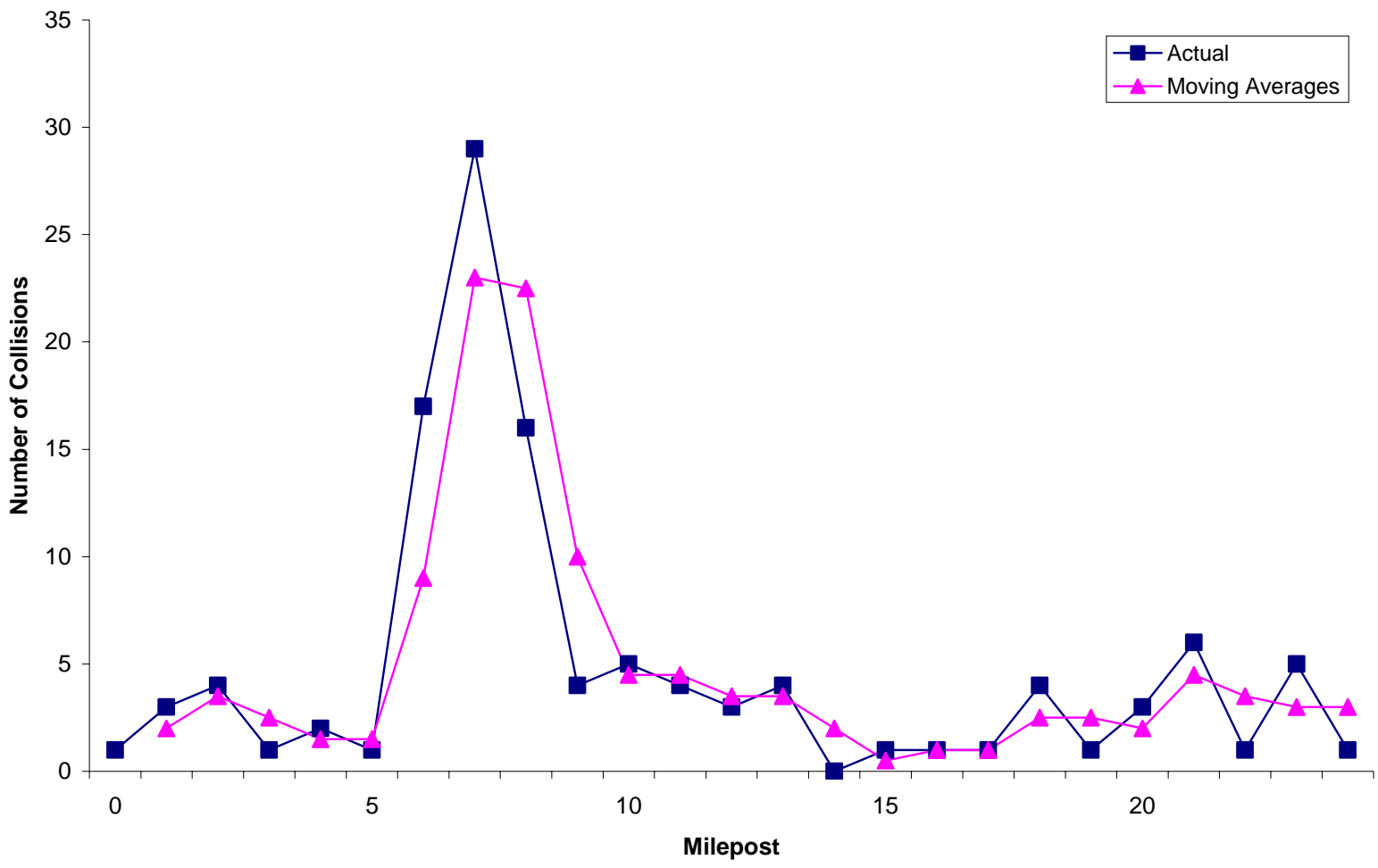


Table 33. Route 130 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 130 from 1992 through 2002. Over these 11 years there were a total of 170 deer-vehicle collisions, resulting in an overall 4.02 collisions per mile on this route. With 4.02 collisions per mile, Route 130 ranked twenty-seventh in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 130 is 42.3 miles in length running from north from Route 15 through Cedar City to Route 21 north of Minersville.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
3-5	3	104	34.67	3.15
0-1	1	20	20.00	1.82

Route 130 Deer Road Mortality (1992-2002)

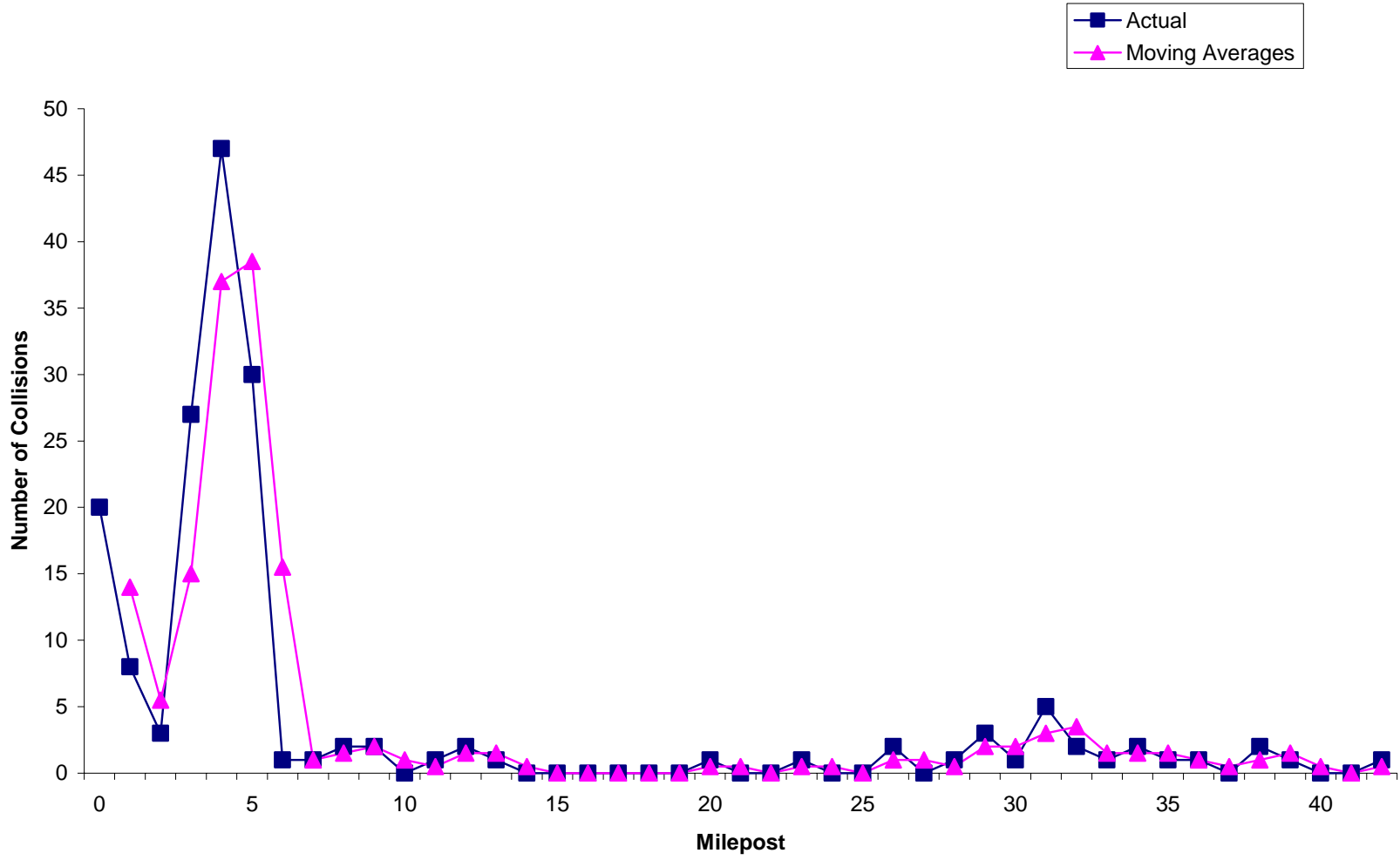


Table 34. Route 132 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 132 from 1992 through 2002. Over these 11 years there were a total of 327 deer-vehicle collisions, resulting in an overall 5.18 collisions per mile on this route. With 5.18 collisions per mile, Route 132 ranked as the fifth most dangerous long route (50 miles or more) of those analyzed in Utah.

Route 132 is 63.133 miles in length running from Route 6 in Lynndyl northeasterly through Leamington to Nephi; then southeasterly through Fountain Green and Moroni to Route 89 at Pigeon Hollow Junction.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
37-45	9	125	13.89	37-45

Route 132 Deer Road Mortality
(1992-2002)

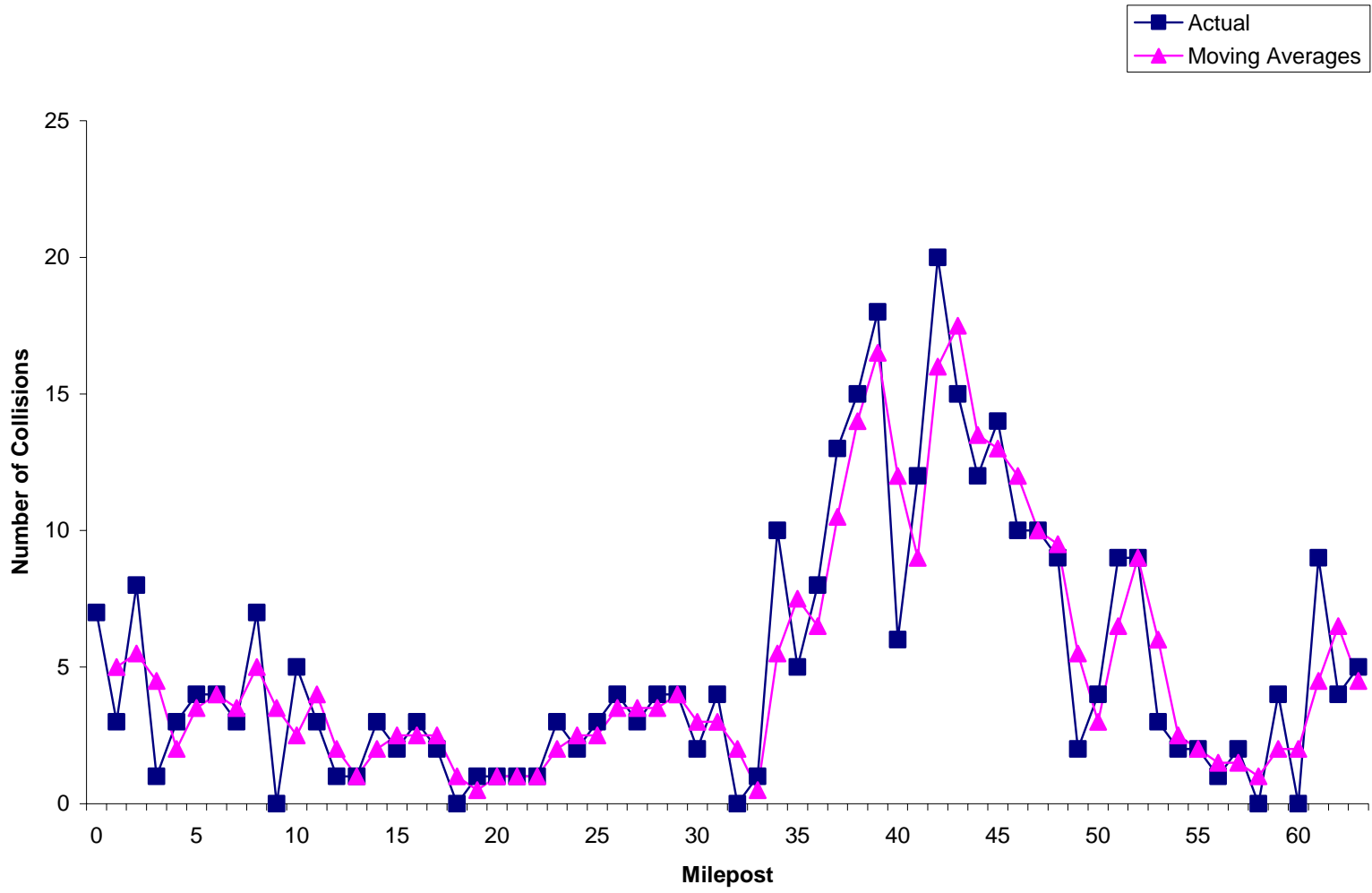


Table 35. Route 146 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 146 from 1992 through 2002. Over these 11 years there were a total of 113 deer-vehicle collisions, resulting in an overall 21.27 collisions per mile on this route. With 21.27 collisions per mile, Route 146 ranked first in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 146 is 5.313 miles in length running north from Route 89 at Pleasant Grove to Route 92 near the mouth of American Fork Canyon.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
2-4	3	101	33.67	3.06

Route 146 Deer Road Mortality
(1992-2002)

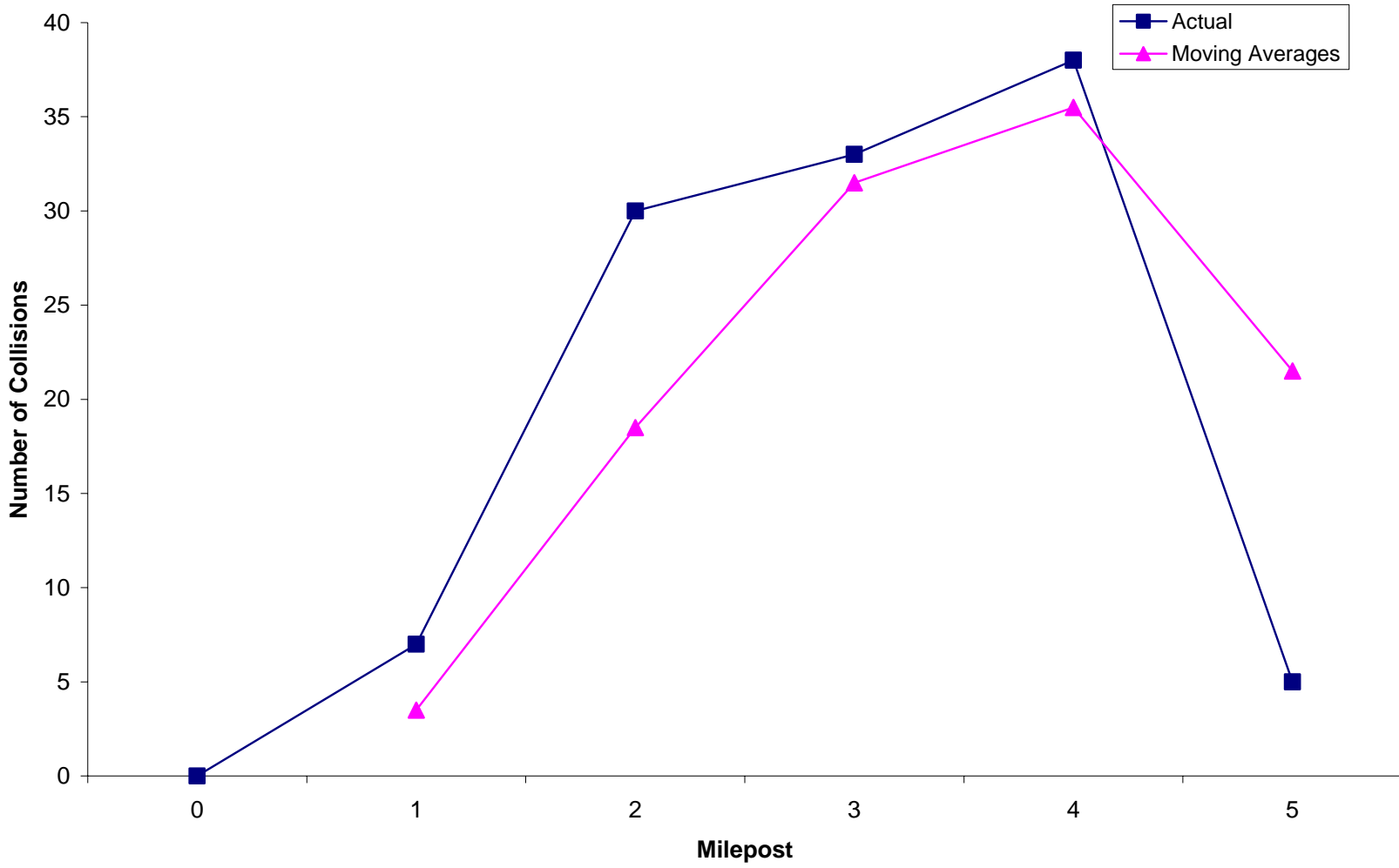


Table 36. Route 173 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 173 from 1992 through 2002. Over these 11 years there were a total of 30 deer-vehicle collisions, resulting in an overall 3.05 collisions per mile on this route. With 3.05 collisions per mile, Route 173 ranked twenty-ninth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 173 is 9.822 miles in length running from Route 111 southeast of Magna east through Kearns and Murray to Route 89 at 5300 South Street in Murray.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-1	1	14	14.00	1.27

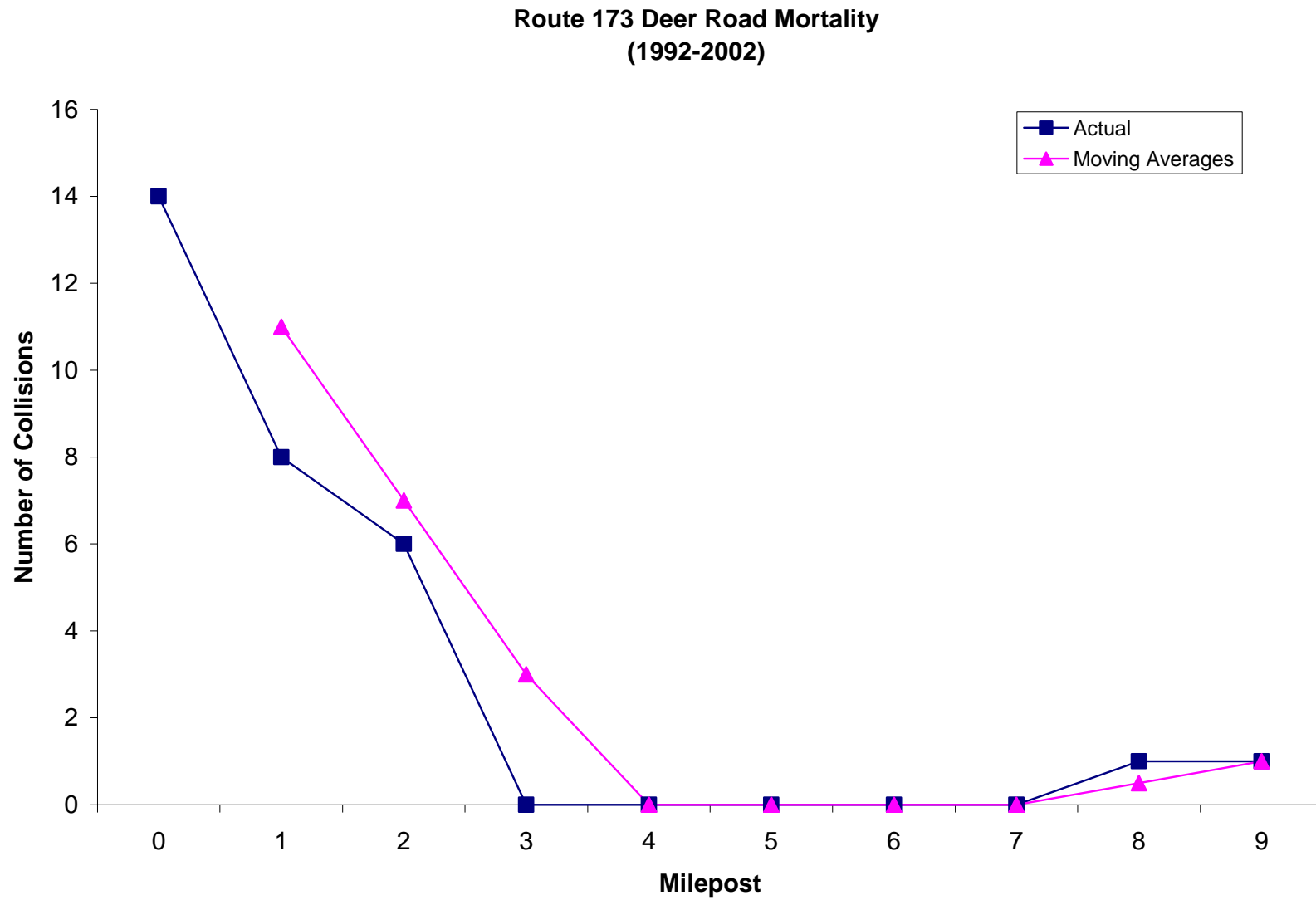


Table 37. Route 184 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 184 from 1992 through 2002. Over these 11 years there were a total of 21 deer-vehicle collisions, resulting in an overall 10.81 collisions per mile on this route. With 10.81 collisions per mile, Route 184 ranked tenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 184 is 1.942 miles in length running from Route 89 at North Temple and State Streets in Salt Lake City north on State Street to the State Capitol. It continues west on Second North and north on Columbus Street and Victory Road to Route 89 at Beck Street.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-1	1	15	15.00	1.36

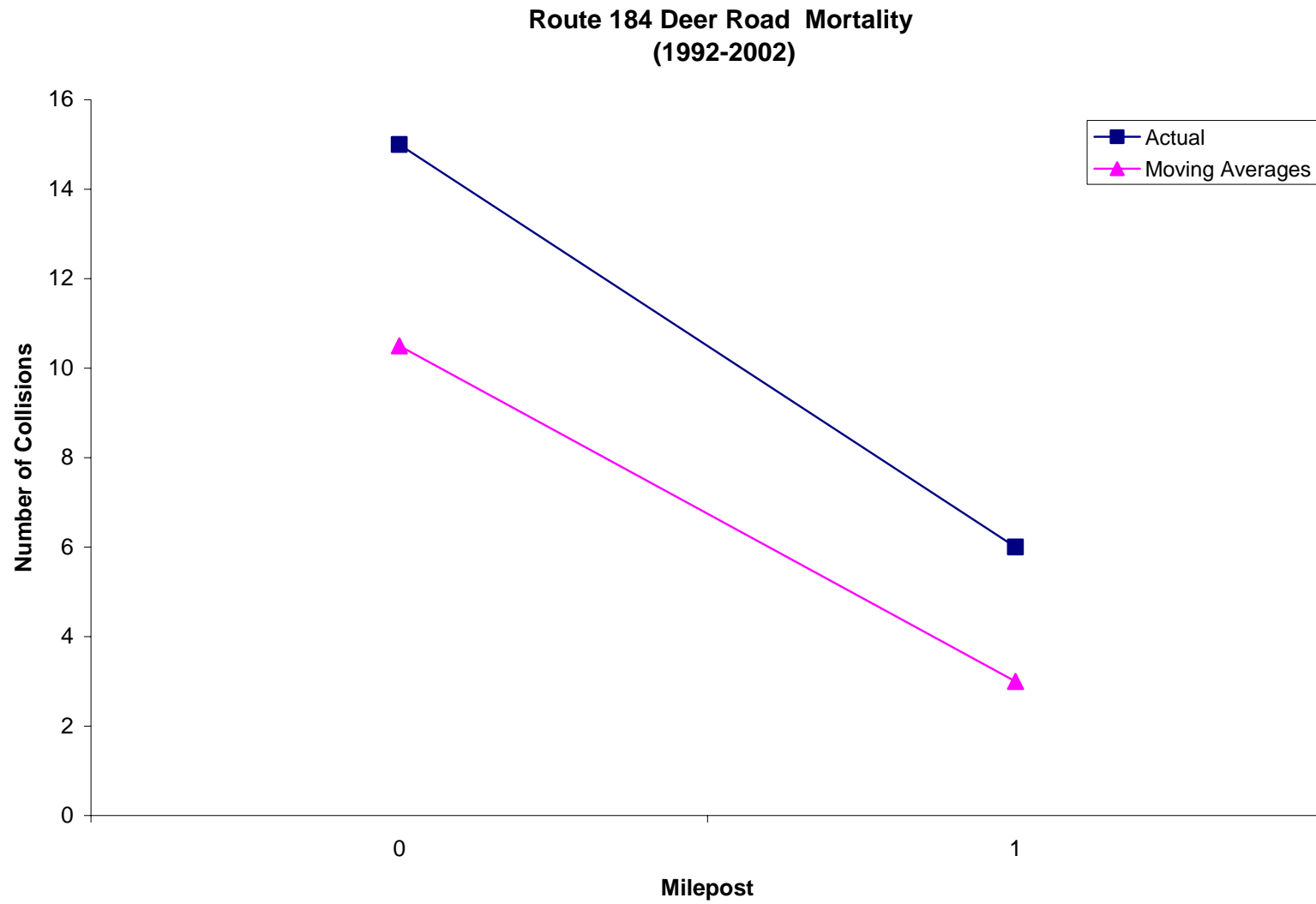


Table 38. Route 186 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 186 from 1992 through 2002. Over these 11 years there were a total of 59 deer-vehicle collisions, resulting in an overall 4.75 collisions per mile on this route. With 4.75 collisions per mile, Route 186 ranked twenty-fifth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 186 is 12.411 miles in length running from Route 80 east on North Temple Street in Salt Lake City to Third West Street. It then runs south on Third West Street to Fourth South Street; east on Fourth South, Tenth East, Fifth South Streets and Foothill Boulevard to Route 80 near the mouth of Parley's Canyon.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
10-11	2	43	21.50	1.95

Route 186 Deer Road Mortality
(1992-2003)

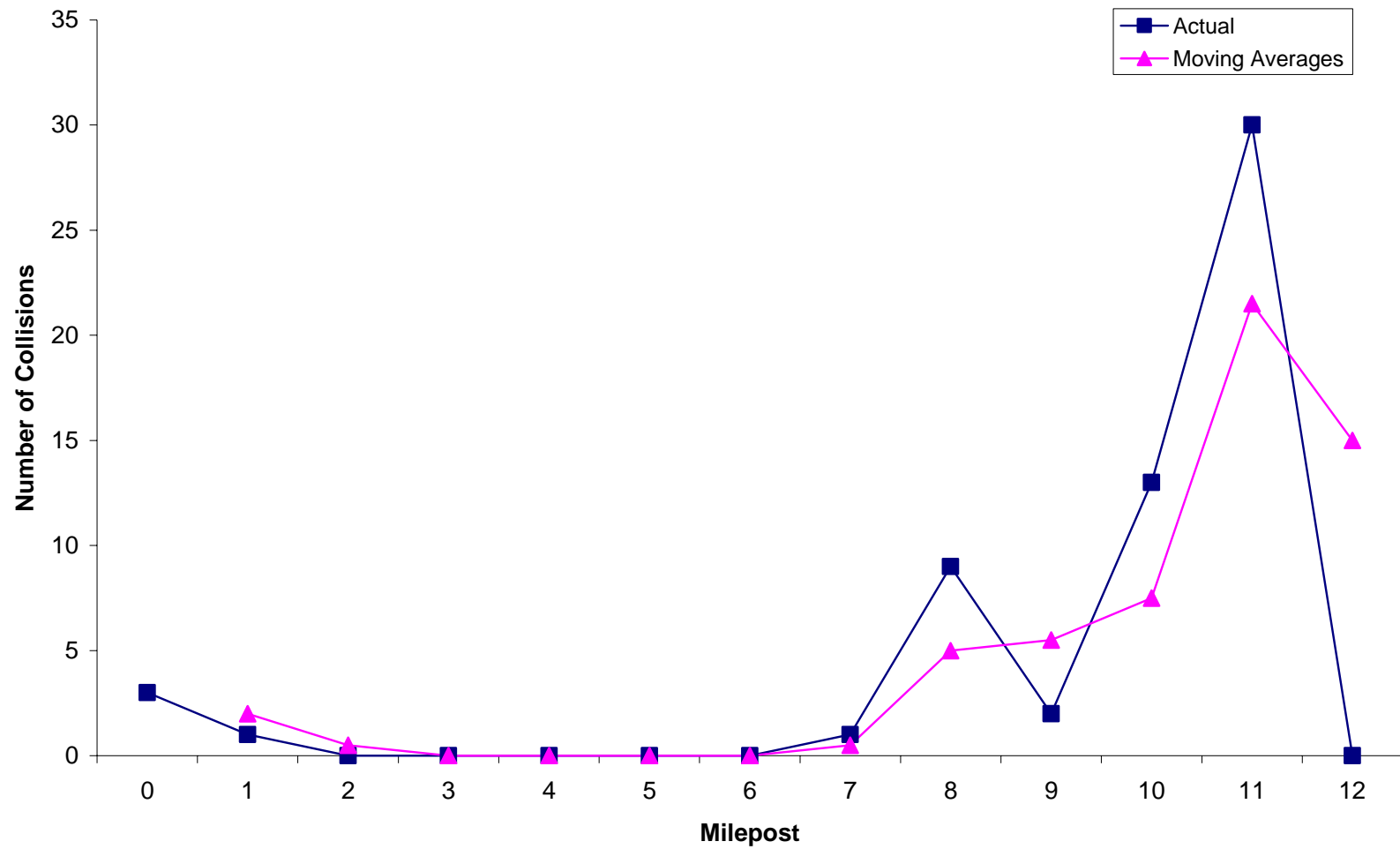


Table 39. Route 189 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 189 from 1992 through 2002. Over these 11 years there were a total of 396 deer-vehicle collisions, resulting in an overall 13.55 collisions per mile on this route. With 13.55 collisions per mile, Route 189 ranked fifth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 189 is 29.216 miles in length beginning from Route 15 south of Provo and running north on University Avenue and Provo Canyon to Route 40 south of Heber City.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
16-25	10	232	23.20	2.11
5-6	2	41	20.50	1.86
8-9	2	25	12.50	1.14
11	1	12	12.00	1.09

Route 189 Deer Road Mortality
(1992-2002)

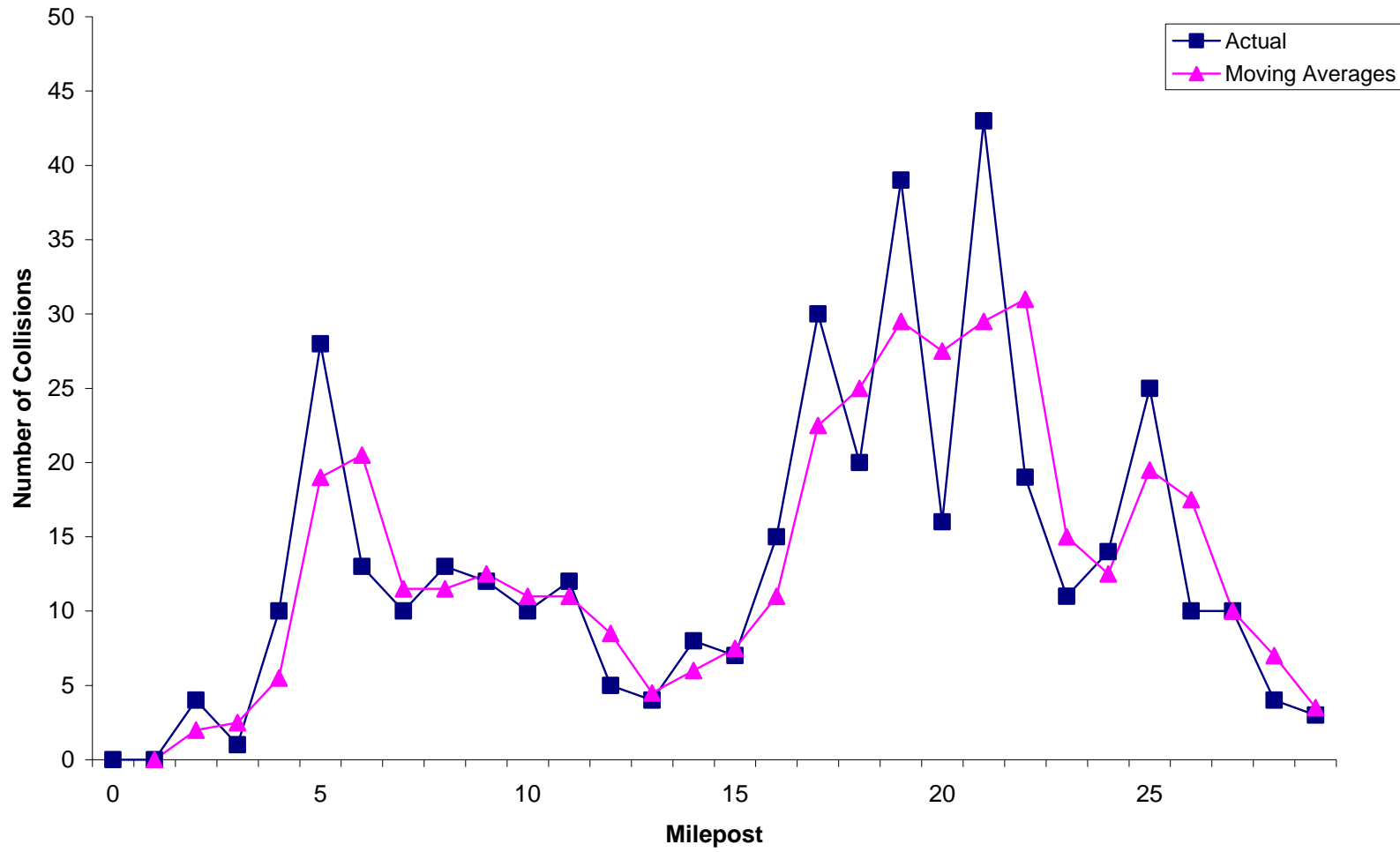


Table 40. Route 190 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 190 from 1992 through 2002. Over these 11 years there were a total of 81 deer-vehicle collisions, resulting in an overall 4.07 collisions per mile on this route. With 4.07 collisions per mile, Route 190 ranked twenty-sixth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 190 is 19.921 miles in length running from Route 215 at Knudsen's Corner southeast to Route 210 at the mouth of Big Cottonwood Canyon. It then runs east through Big Cottonwood Canyon to Brighton, including Brighton Loop and east through Guardsman Pass to the Salt Lake-Wasatch County line.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-2	2	26	13.00	1.18

Route190 Deer Road Mortality
(1992-2002)

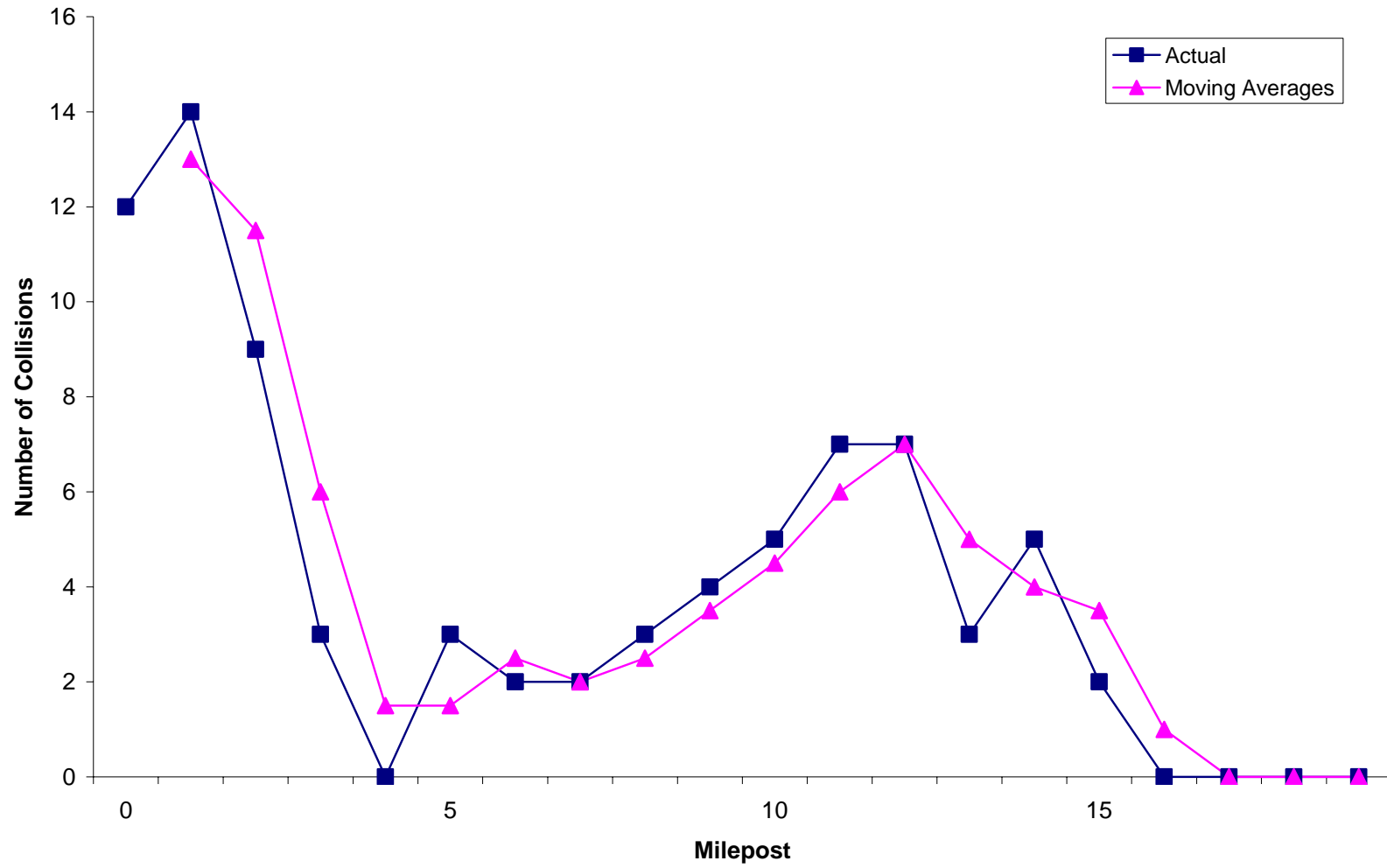


Table 41. Route 191 Hotspots (1992-2002)

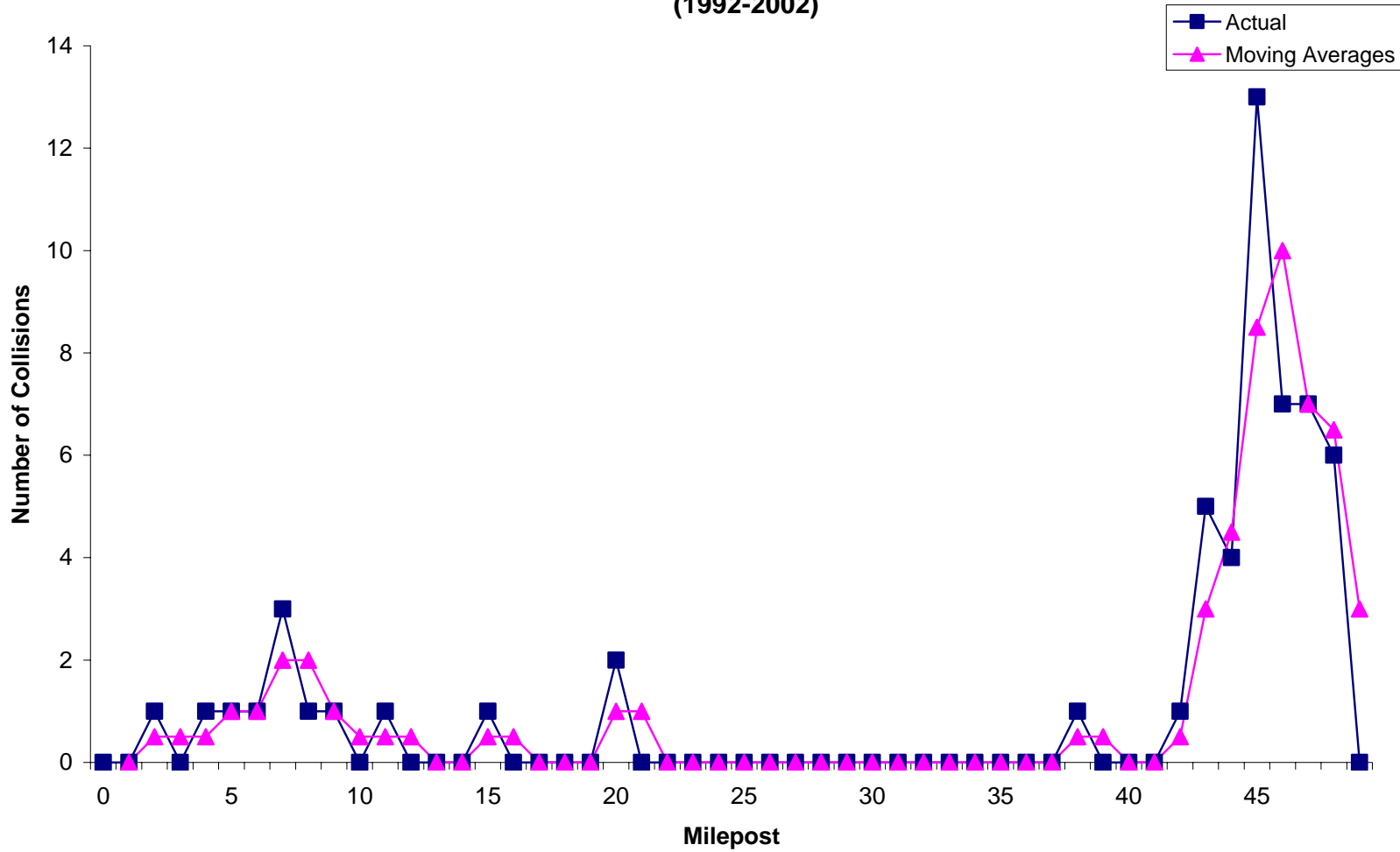
This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 191 from 1992 through 2002. Over these 11 years there were a total of 1066 deer-vehicle collisions, resulting in an overall 4.2 collisions per mile on this route. With 4.2 collisions per mile, Route 191 ranked as the eighth most dangerous long route (50 miles or more) of those analyzed in Utah.

On this route there is a larger hotspot region, milepost 60-75 with 30.44 collisions per mile. In this table, this area is represented as one larger hotspot, but it should be noted that within this hotspot there is a 4 mile section (mileposts 67-70) that has 48.25 collisions per mile. Thus, although the whole area is a hotspot, the collisions are not evenly distributed across it. This table also includes other smaller hotspots that did not fall within the major hotspot regions.

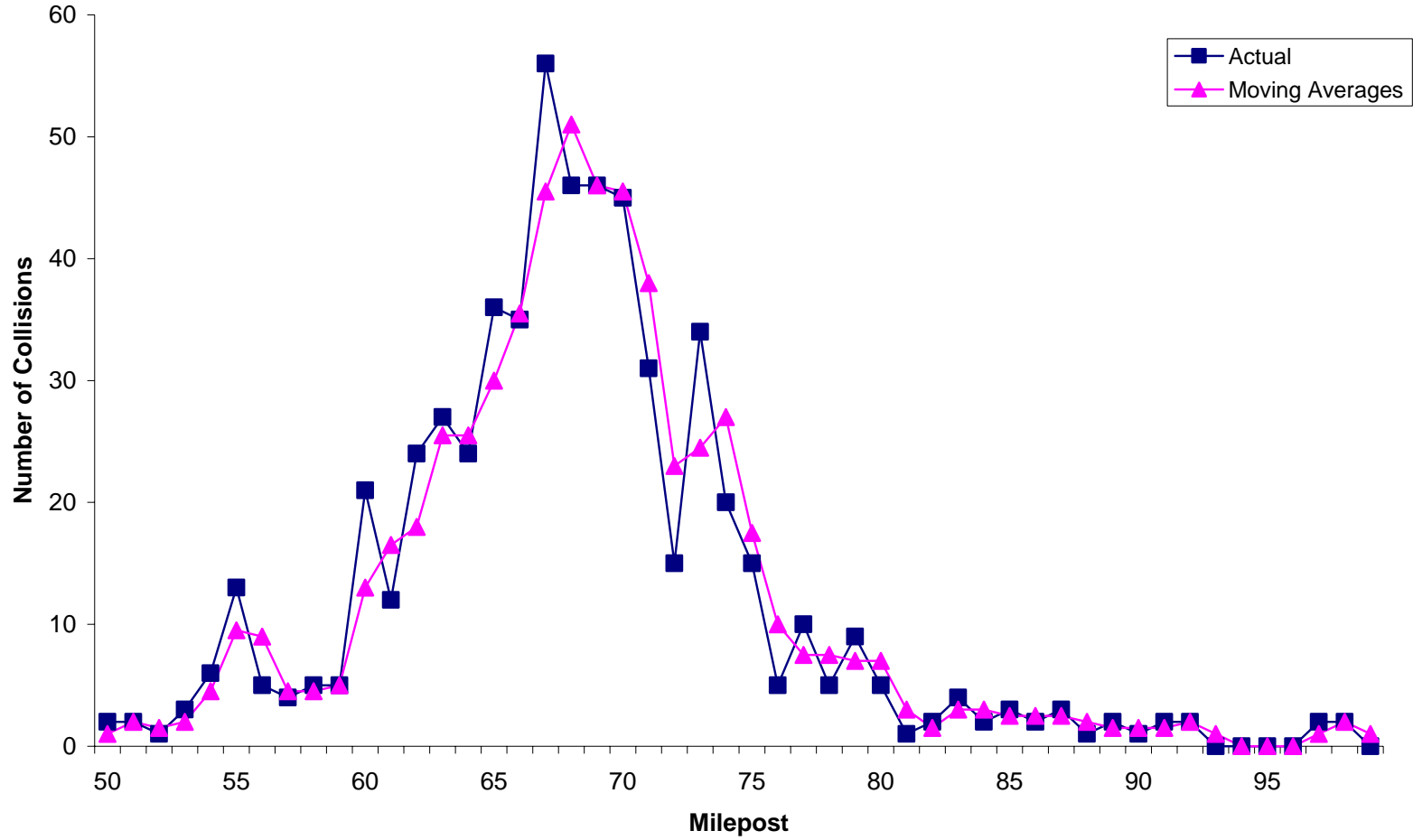
Route 191 is 253.322 miles in length running from the Utah-Arizona state line south of Bluff northerly through Blanding, Monticello, and Moab to Route 70 at Crescent Junction; then beginning again from Route 6 north of Helper northerly through Indian Canyon to Route 40 at Duchesne; then beginning again from Route 40 at Vernal northerly through Greendale Junction and Dutch John to the Utah-Wyoming state line.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
60-75	16	487	30.44	2.8
202	1	17	17	1.5
45	1	13	13	1.2
55	1	13	13	1.2
127	1	13	13	1.2

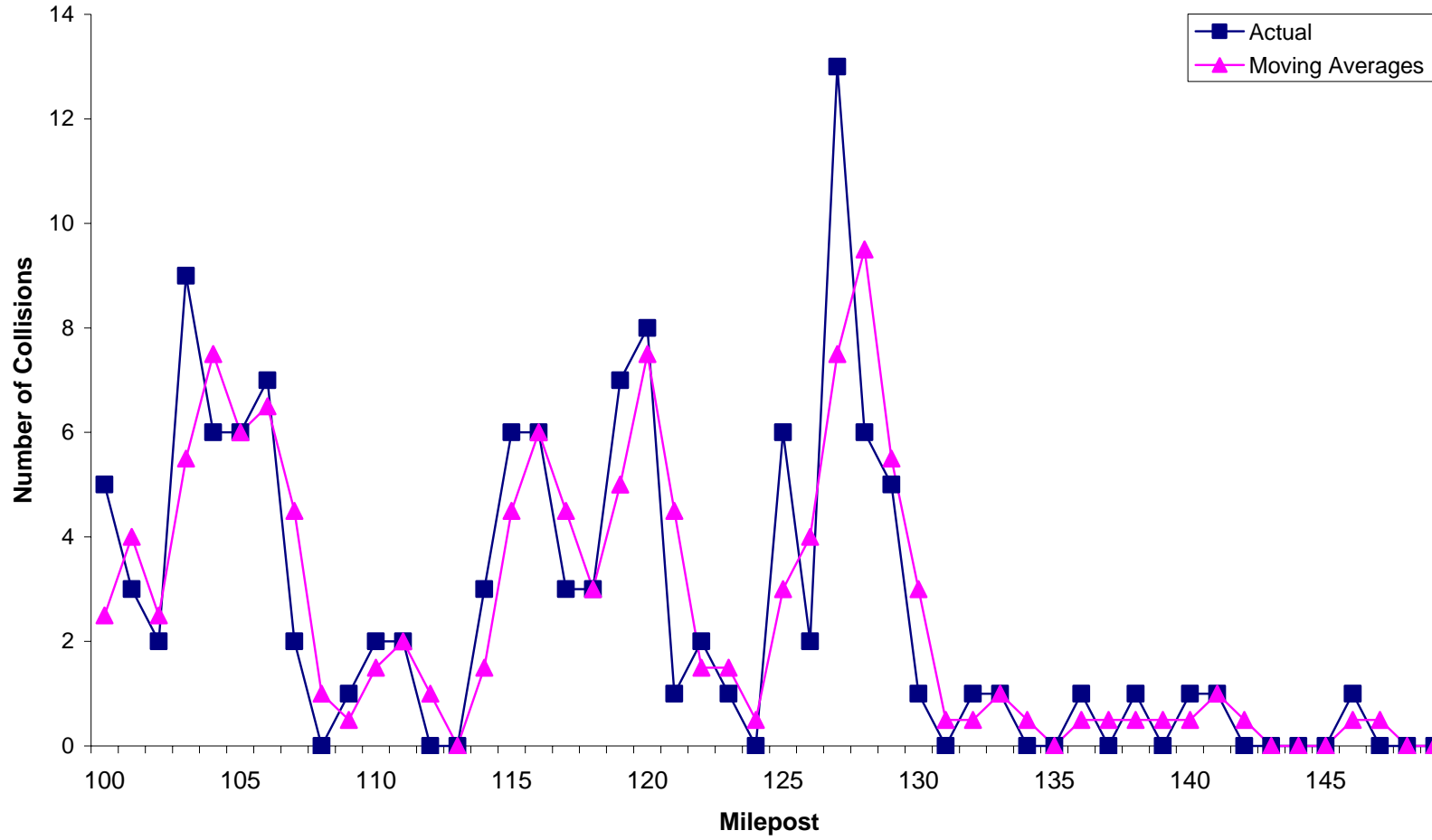
Route191 Deer Road Mortality
Milepost 0-49
(1992-2002)



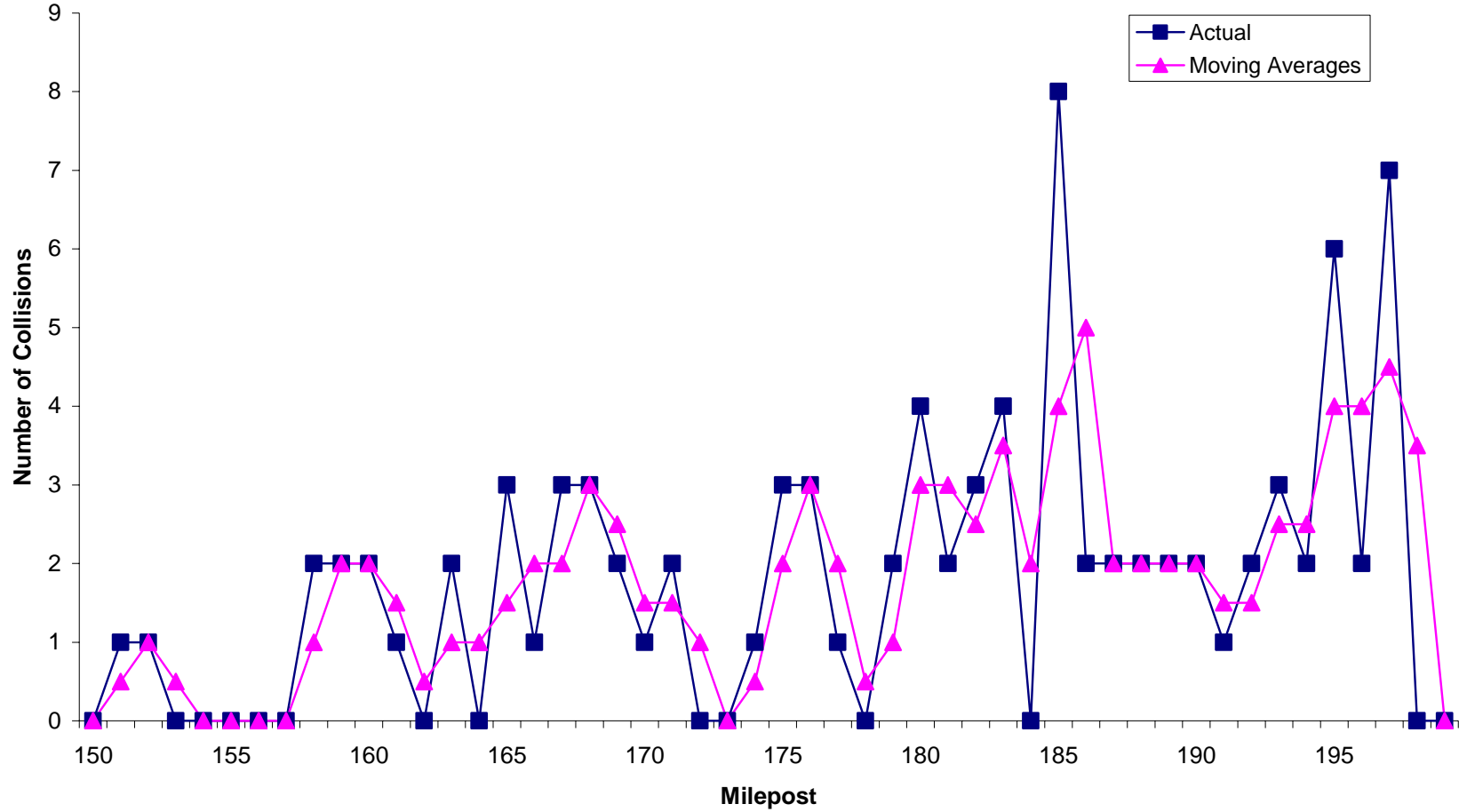
**Route191 Deer Road Mortality
Milepost 50-99
(1992-2002)**



Route191 Deer Road Mortality
Milepost 100-149
(1992-2002)



**Route191 Deer Road Mortality
Milepost 150-199
(1992-2002)**



**Route191 Deer Road Mortality
Milepost 200-254
(1992-2002)**

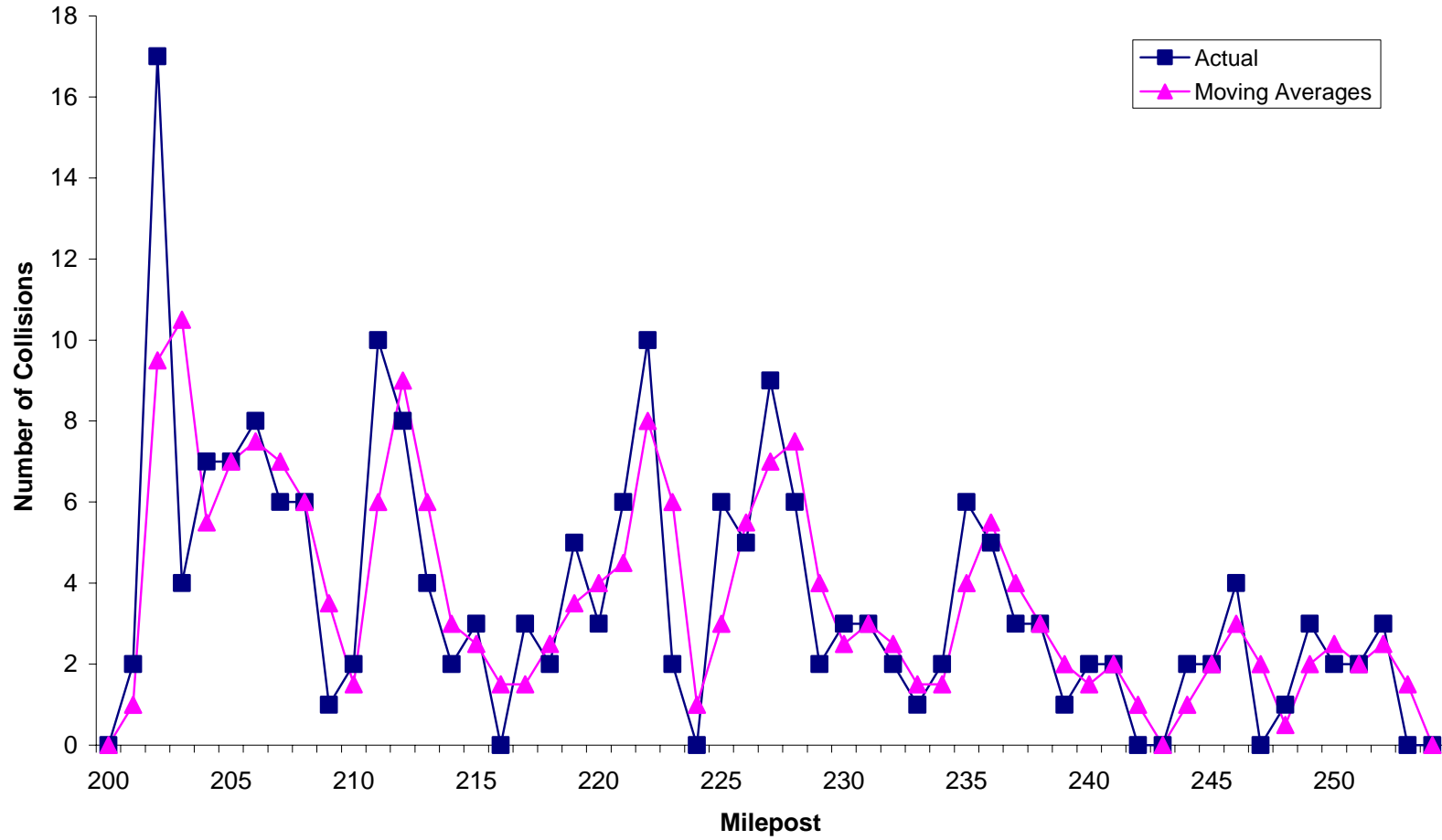


Table 42. Route 193 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 193 from 1992 through 2002. Over these 11 years there were a total of 41 deer-vehicle collisions, resulting in an overall 7.21 collisions per mile on this route. With 7.21 collisions per mile, Route 193 ranked eighteenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 193 is 5.689 miles in length running from Route 126 in Clearfield east through the south entrance to Hill Air Force Base to Route 89.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
5	1	20	20.00	1.82

Route 193 Deer Road Mortality
(1992-2002)

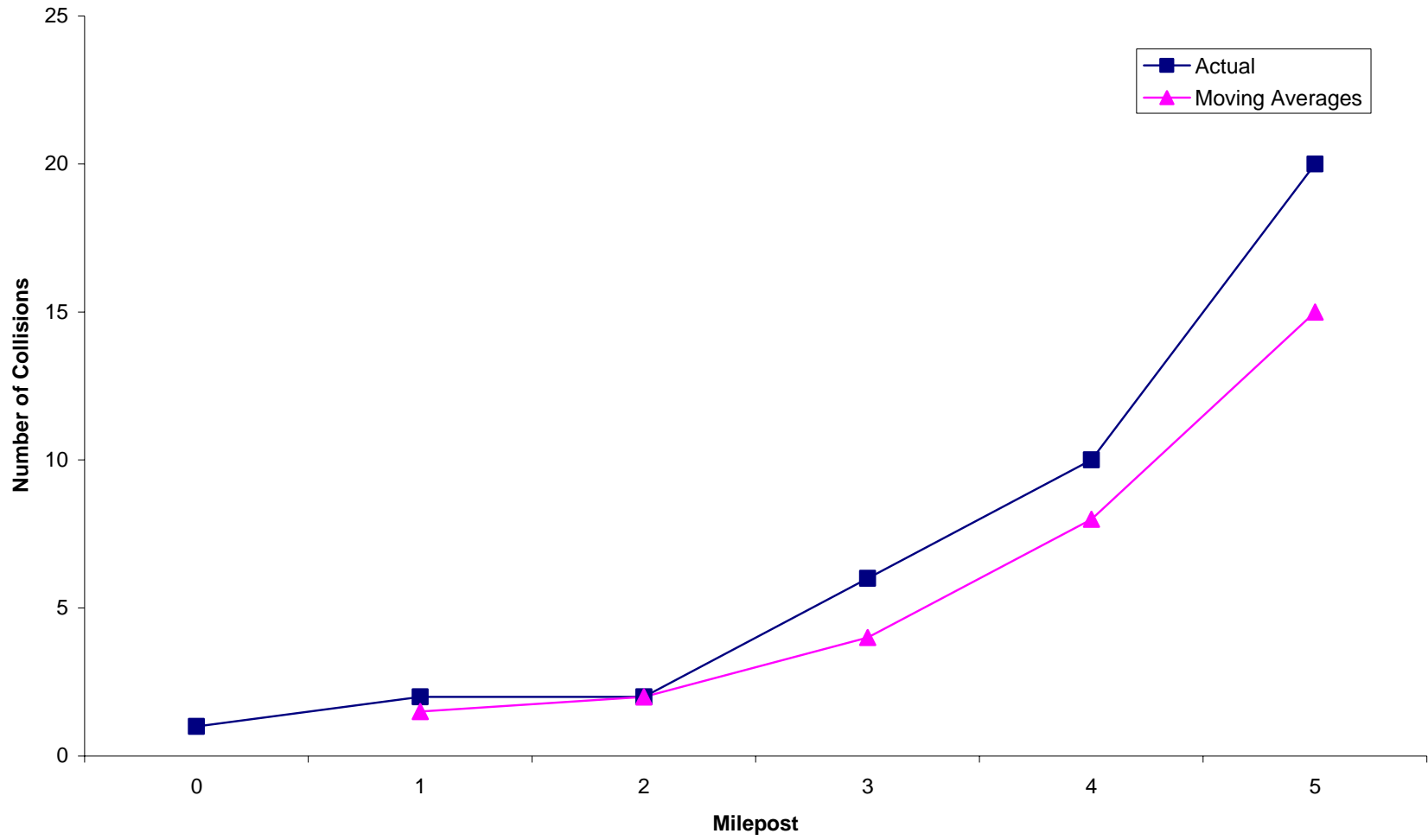


Table 43. Route 198 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 198 from 1992 through 2002. Over these 11 years there were a total of 41 deer-vehicle collisions, resulting in an overall 2.61 collisions per mile on this route. With 2.61 collisions per mile, Route 198 ranked thirty-first in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 198 is 15.728 miles in length and begins by running from the Route 15 northbound ramps of the North Santaquin Interchange northeast through Spring Lake to 100 North in Payson. It continues east and northeast through Salem to 300 South in Spanish Fork and then east and southeast to Route 6 at Moark Junction.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-2	2	28	14.00	1.27

Route 198 Deer Road Mortality
(1992-2003)

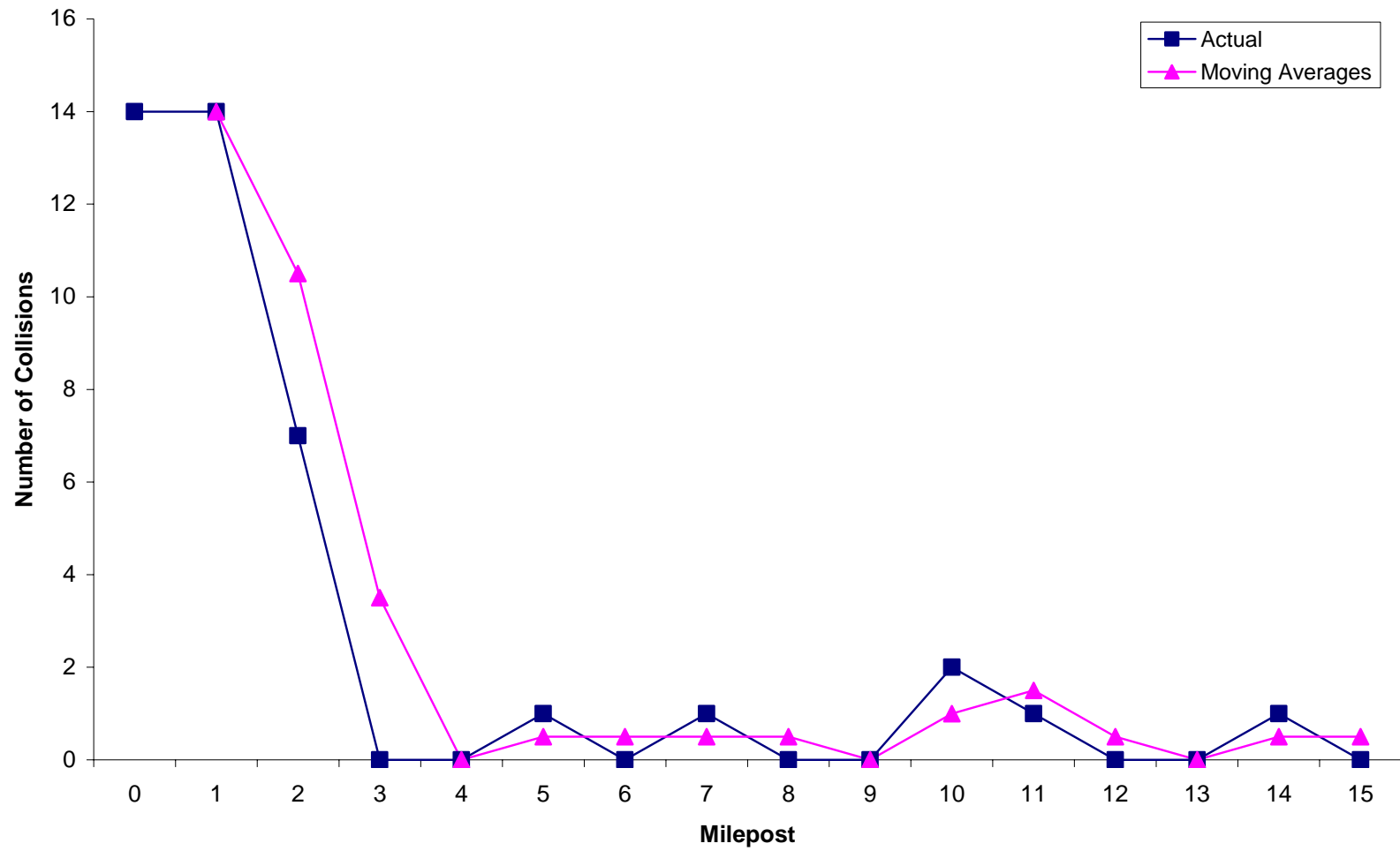


Table 44. Route 201 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 201 from 1992 through 2002. Over these 11 years there were a total of 181 deer-vehicle collisions, resulting in an overall 10.04 collisions per mile on this route. With 10.04 collisions per mile, Route 201 ranked eleventh in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 201 is 18.034 miles in length running from Route 80 at Lake Point Junction east on Twenty-first South Street to Route 89 in Salt Lake City.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
5-7	3	67	22.33	2.03
0-3	4	78	19.50	1.77

Route 201 Deer Road Mortality
(1992-2002)

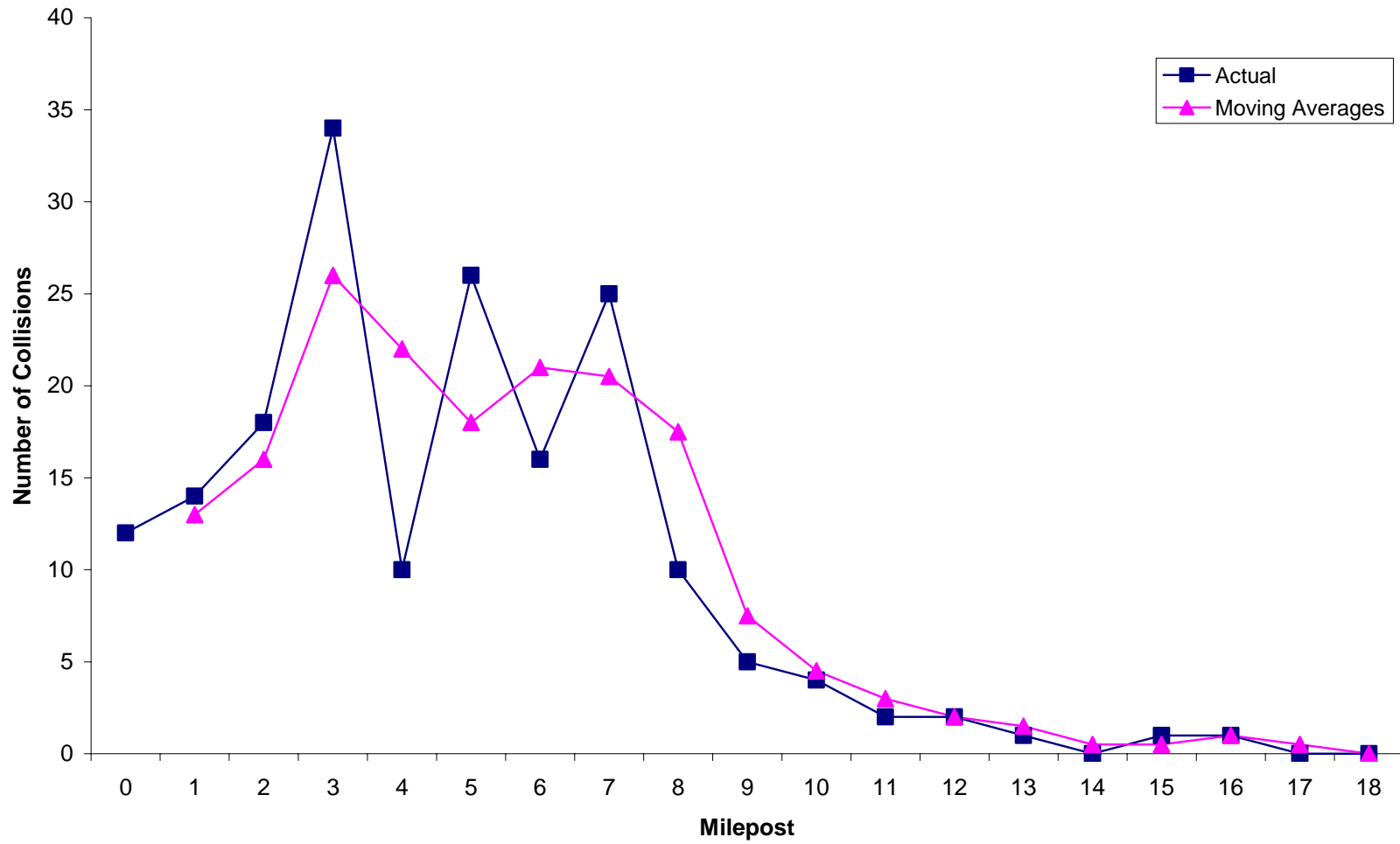


Table 45. Route 203 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 203 from 1992 through 2002. Over these 11 years there were a total of 84 deer-vehicle collisions, resulting in an overall 13.67 collisions per mile on this route. With 13.67 collisions per mile, Route 203 ranked fourth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 203 is 6.145 miles in length running north from Route 89 near Uintah on Harrison Boulevard in Ogden to Route 39.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-2	2	52	26.00	2.36
5-6	1	20	20.00	1.82

**Route 203 Deer Road Mortality
(1992-2002)**

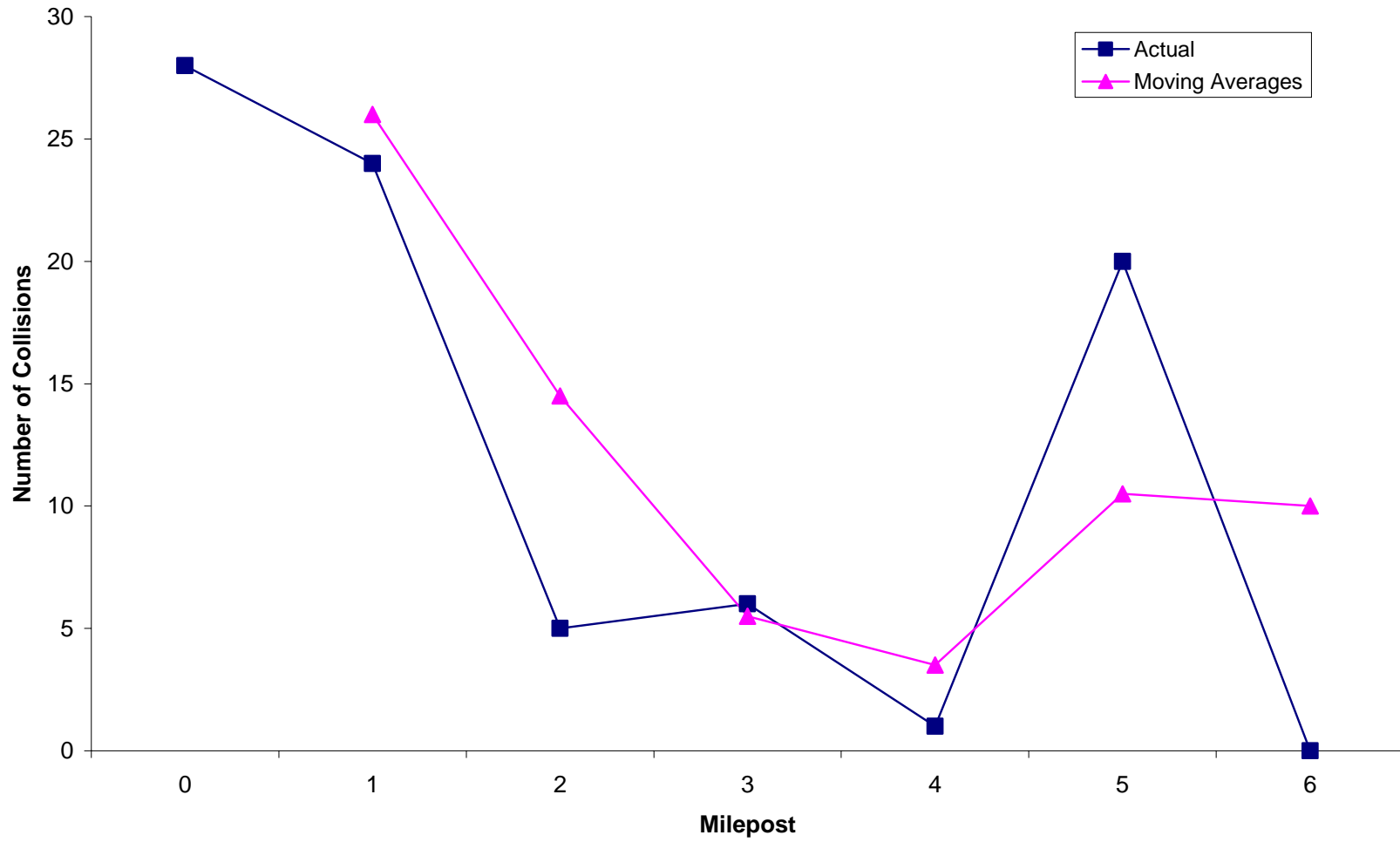


Table 46. Route 209 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 209 from 1992 through 2002. Over these 11 years there were a total of 26 deer-vehicle collisions, resulting in an overall 1.78 collisions per mile on this route. With 1.78 collisions per mile, Route 209 ranked thirty-second in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 209 is 14.57 miles in length running from Route 68 east on Ninetieth South Street and then southeast to Ninety-fourth South Street. It continues east to Route 210 near the mouth of Little Cottonwood Canyon.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
6-7	1	16	16.00	1.45

Route 209 Deer Road Mortality
(1992-2002)

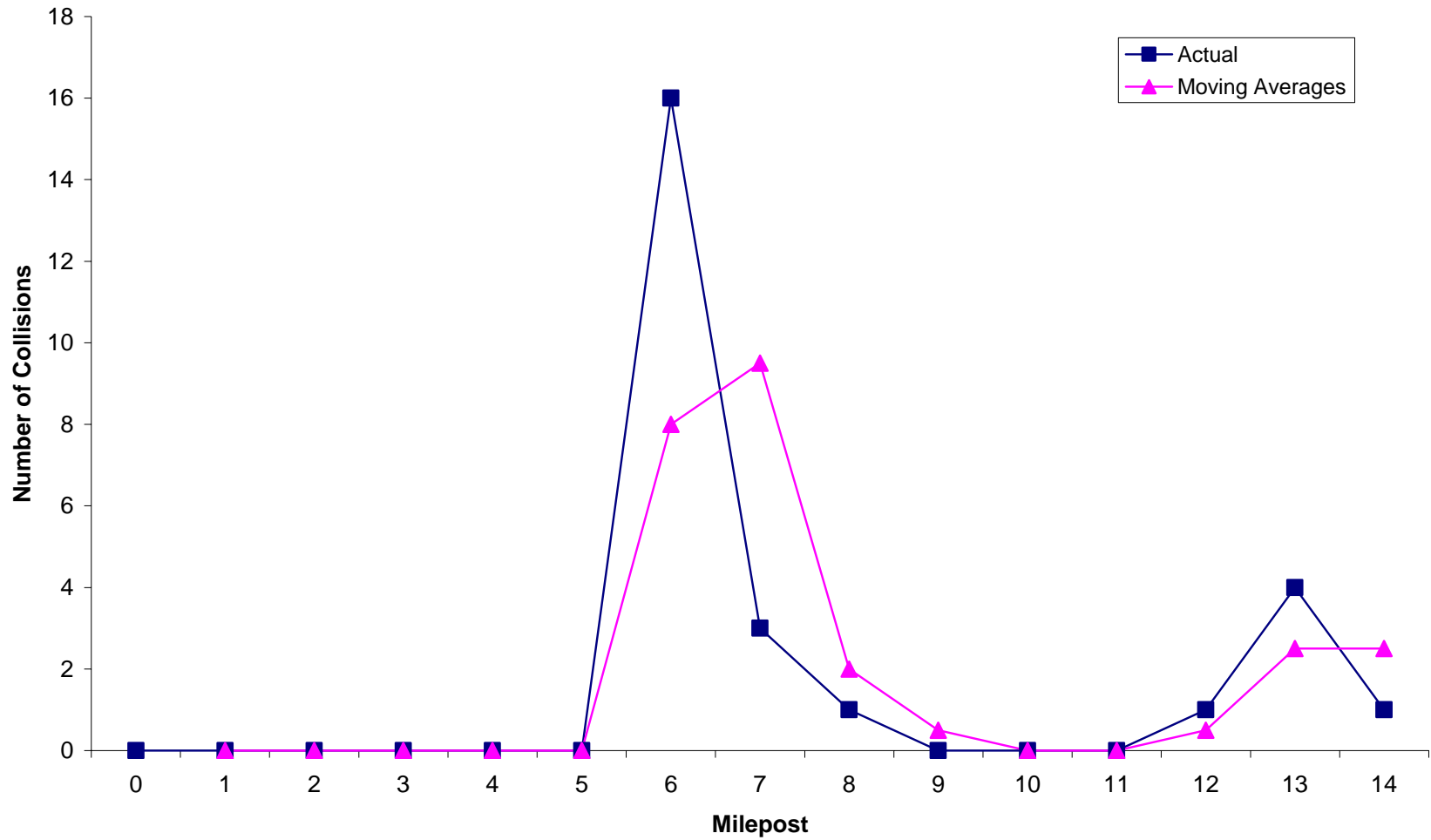


Table 47. Route 210 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 210 from 1992 through 2002. Over these 11 years there were a total of 120 deer-vehicle collisions, resulting in an overall 8.80 collisions per mile on this route. With 8.80 collisions per mile, Route 210 ranked fourteenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 210 is 13.642 miles in length running southeast from Route 190 at the mouth of Big Cottonwood Canyon on Wasatch Boulevard and through Little Cottonwood Canyon, to Alta, including the Alta Bypass.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-4	4	96	24.00	2.18

Route 210 Deer Road Mortality
(1992-2002)

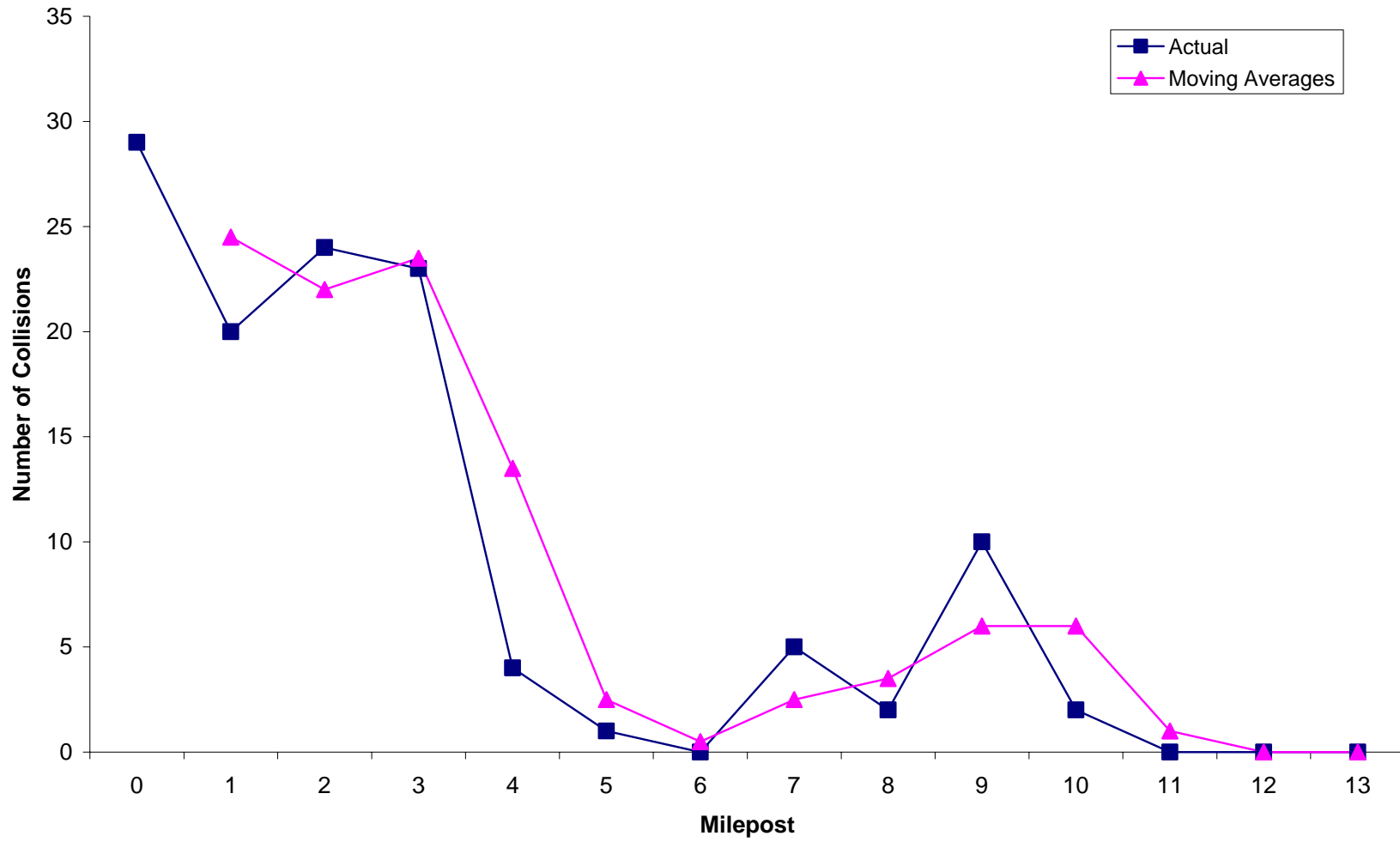


Table 48. Route 215 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 215 from 1992 through 2002. Over these 11 years there were a total of 101 deer-vehicle collisions, resulting in an overall 3.49 collisions per mile on this route. With 3.49 collisions per mile, Route 215 ranked twenty-eighth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 215 is 28.968 miles in length beginning from a junction with Route 80 near the mouth of Parley's Canyon southeast of Salt Lake City. It runs southwest nearing the south city limits of Murray, junctioning with Route 15 and then northwest, north and east to a junction with Route 15 north of Salt Lake City on interstate Route 215.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
0-3	3	42	14.00	1.27

Route 215 Deer Road Mortality
(1992-2002)

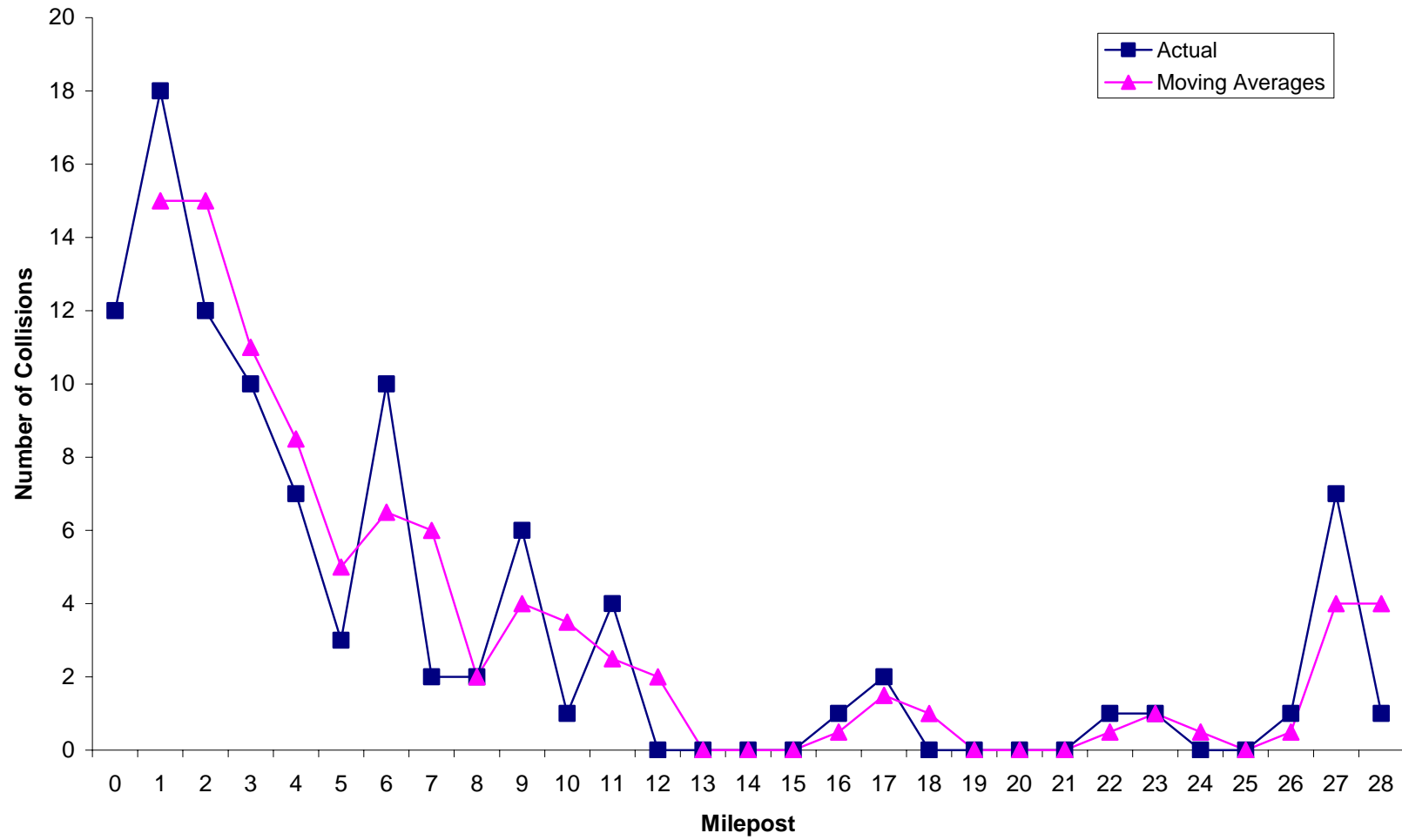


Table 49. Route 224 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 224 from 1992 through 2002. Over these 11 years there were a total of 106 deer-vehicle collisions, resulting in an overall 7.44 collisions per mile on this route. With 7.44 collisions per mile, Route 224 ranked sixteenth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 224 is 14.248 miles long and runs north from Route 113 in Midway to Pine Creek Campground. It begins again at the Wasatch-Summit County line and runs through Ontario Canyon and Park City to Route 80 at Kimball Junction.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
9-11	3	65	21.67	1.97
13	1	12	12.00	1.09

Route 224 Deer Road Mortality
(1992-2002)

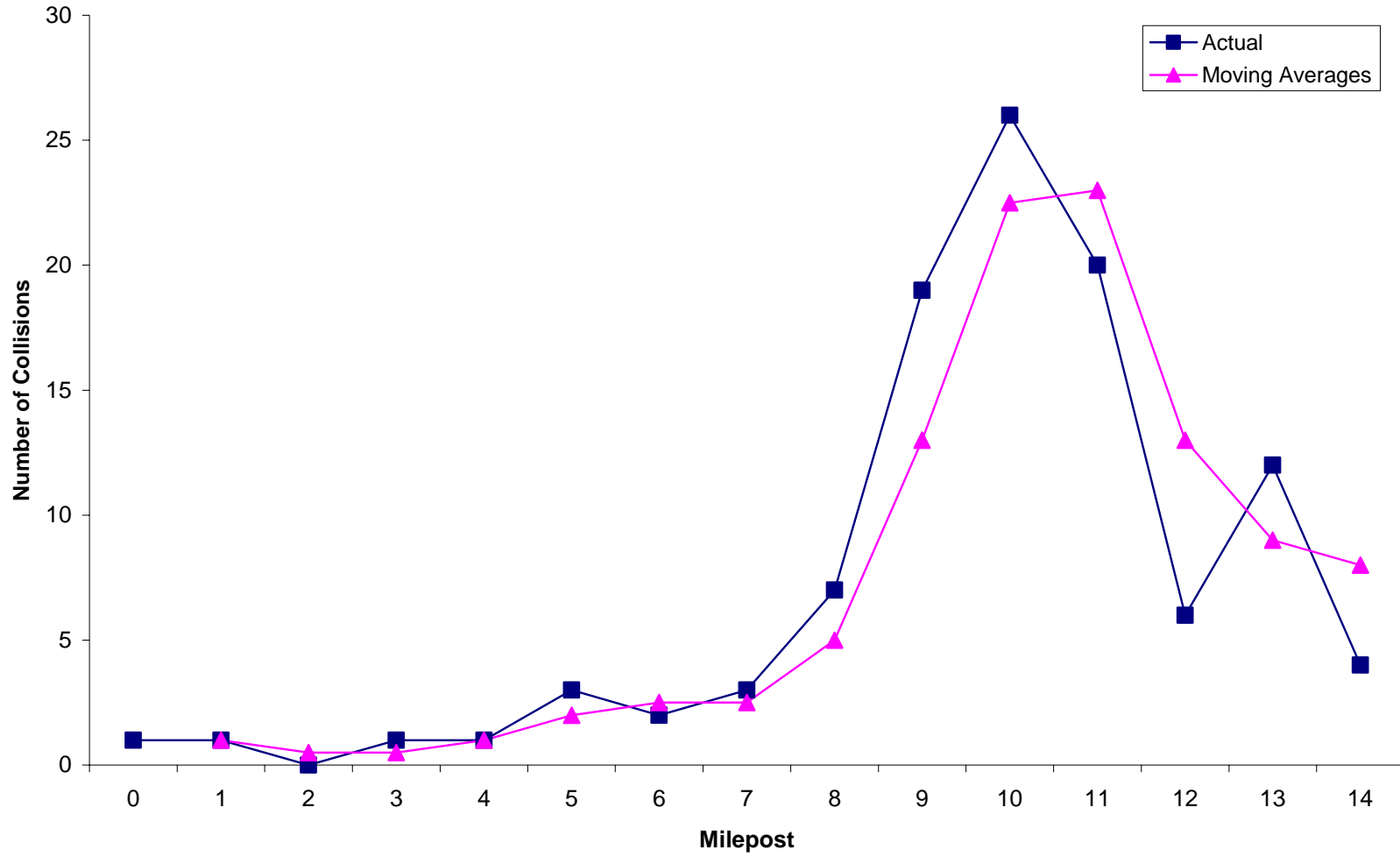


Table 50. Route 248 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 248 from 1992 through 2002. Over these 11 years there were a total of 167 deer-vehicle collisions, resulting in an overall 11.51 collisions per mile on this route. With 11.51 collisions per mile, Route 248 ranked ninth in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 248 is 14.507 miles in length running from Route 224 at Park City Junction to Route 40 at the Park City Interchange and turning south and southeast to Route 32 in Kamas.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
6-7	2	37	18.50	1.68
1-4	4	59	14.75	1.34
9-11	3	43	14.33	1.30

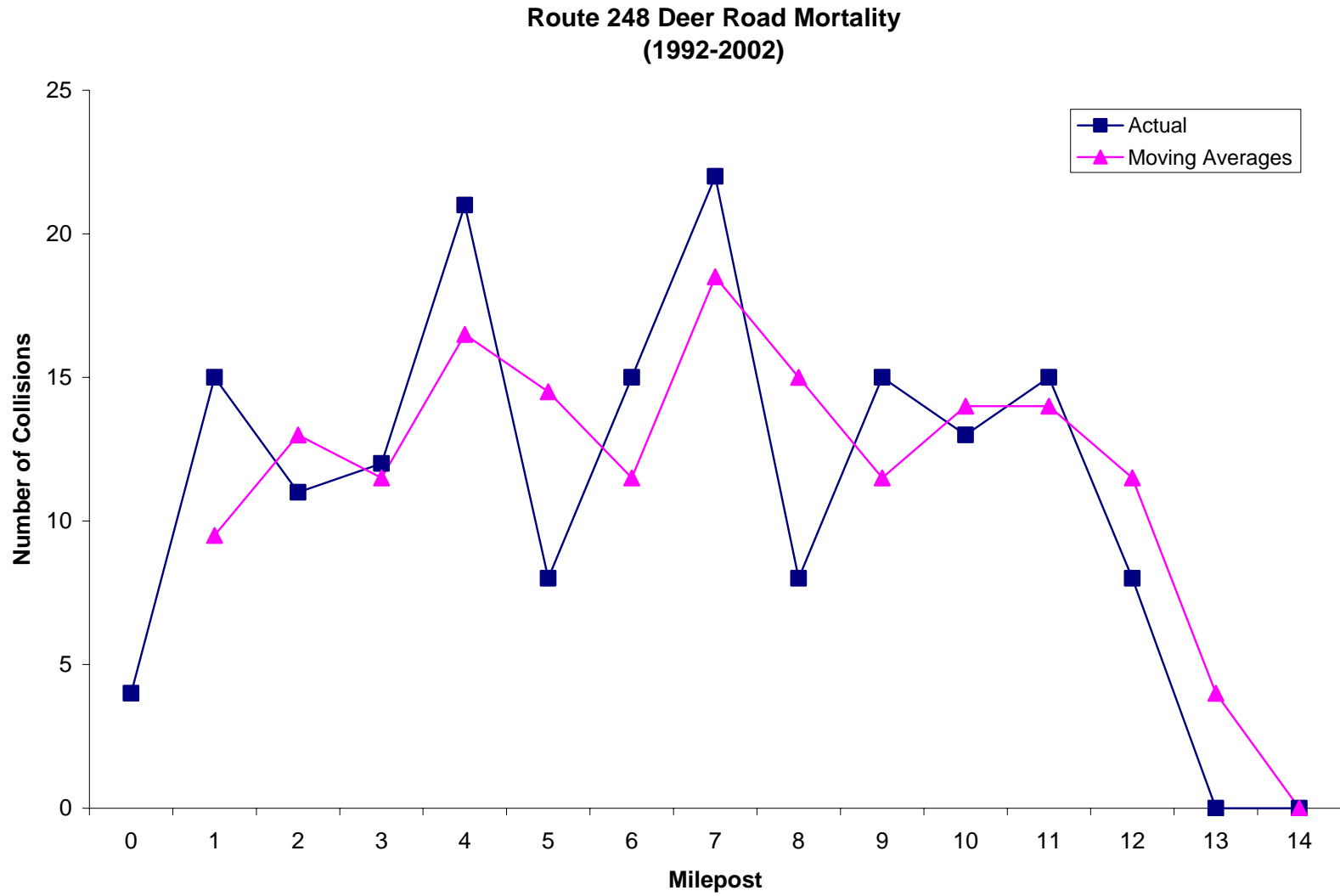


Table 51. Route 273 Hotspots (1992-2002)

This table summarizes the deer-vehicle collision hotspots, ranked by collisions per mile, for Route 273 from 1992 through 2002. Over these 11 years there were a total of 15 deer-vehicle collisions, resulting in an overall 3.049 collisions per mile on this route. With 4.92 collisions per mile, Route 273 ranked twenty-second in collisions per mile among the short routes (less than 50 miles) analyzed in Utah.

Route 273 is 3.049 miles in length running from Route 89 at the North Farmington Interchange north to Kaysville and then west on Cherry Street to Route 15.

Location of Hotspot	Total Hotspot Mileage	Collisions within Hotspot	Hotspot Collisions/Mile	Hotspot Collisions/Mile/Year
1	1	11	11.00	1.00

**Route 273 Deer Road Mortality
(1992-2002)**

