



Wintering Raptor Survey 2018-19 Data Summary

General Summary of the 2018-2019 Wintering Raptor Surveys

- 1. While total numbers of raptors seen on survey routes have fluctuated only slightly from 1990-2019, the composition of Boulder County's wintering raptor population has changed dramatically.**
- 2. Two grassland specialists, ferruginous hawk and rough-legged hawk, have declined by more than 90% as our remaining grasslands and prairie dog colonies have been fragmented by roads, houses, and invasive trees. The rough-legged hawk decline also reflects warming winter temperatures; these small mammal specialists nest in the Arctic tundra and typically migrate only as far south as necessary to escape winter areas of landscape-wide snow cover.**
- 3. This small uptick in numbers of these two grassland specialists in 2018-19 probably reflects very cold winter conditions on the northern plains, along with increasing prairie dog numbers in northern Boulder County.**
- 4. Red-tailed hawks, which are human-adapted generalists, have more than doubled in number.**
- 5. American kestrel and northern harrier numbers have varied dramatically from year to year. This reflects the dependence of both species on meadow voles, whose abundance cycles dramatically from year to year.**
- 6. Numbers of wintering bald eagles and golden eagles have declined, even as numbers of nesting bald eagles have increased. This decline probably also reflects loss of prairie dog colonies, the apparent extirpation of white-tailed jackrabbits from the plains of Boulder County, and fragmentation of remaining grasslands by housing developments and invasive deciduous trees.**

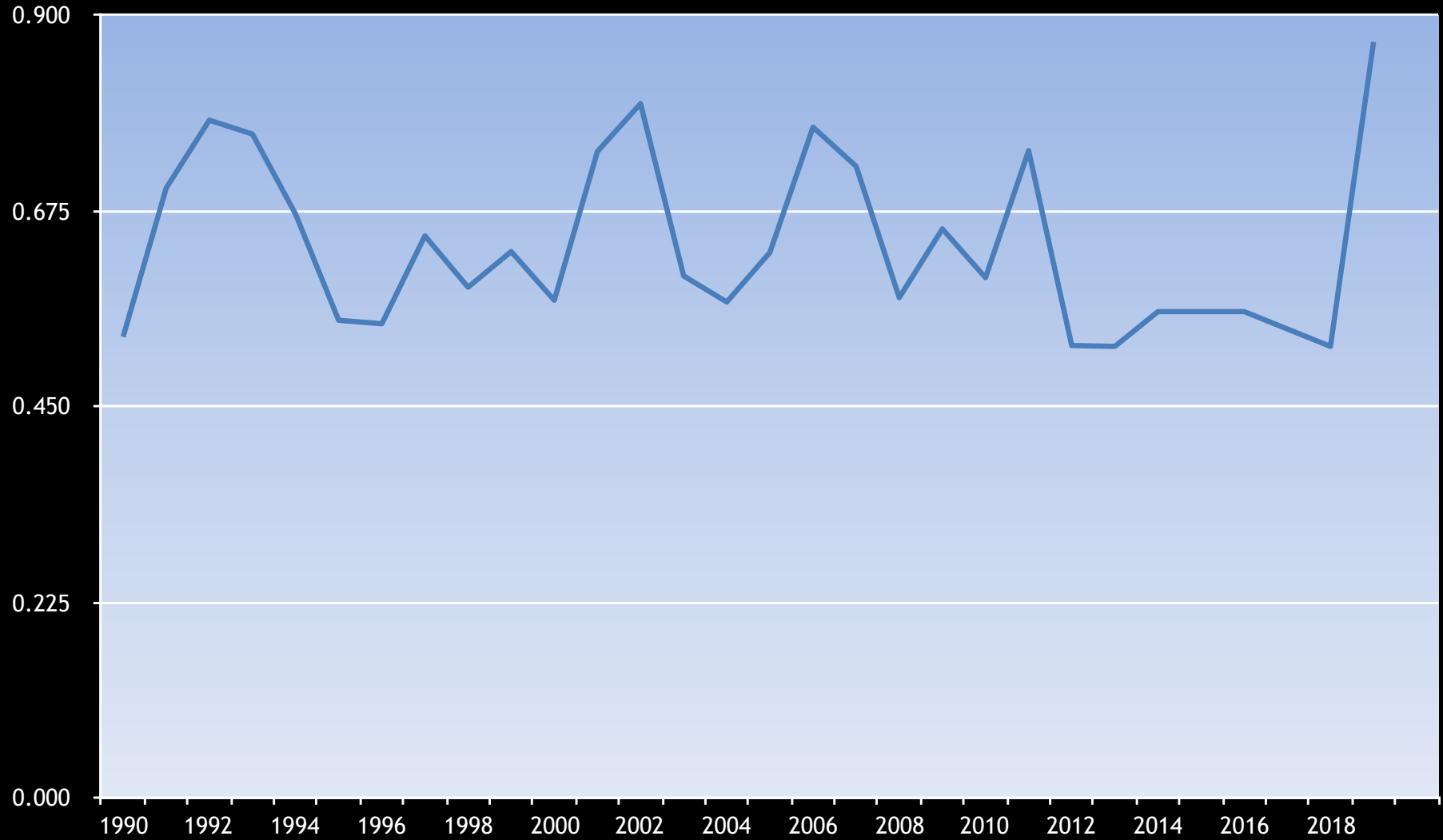
Boulder County Wintering Raptor Survey 2018-19 Results Summary

Survey Route	Minimum Time	Time Range (minutes)	Mean Individuals	Individuals Range
Boulder Reservoir	40 min.	50-118	15.5	8-26
East County	60 min.	37-100	27.0	10-46
Rabbit Mountain North	60 min.	-5 to 110	19.5	9-36
Rabbit Mountain South	57 min.	39-140	22.1	10-42
South County	55 min.	96-150	15.6	8-34
Stearns Lake	40 min.	42-270	23.3	11-35

Mean number/trip, 2018-19

Route	Km	Trip s	RT	FH	RL	UB	NH	BE	GE	UE	AK	MR	PF	UF	SS	CH	HO	LO	TV	Total
Boulder Res.	19 km	27	9.18	1.07	0.44	1.29	0.52	1	0.3	0.05	1.59		0.18				0.04			15.66
East County	30 km	33	16.94		0.03	1.21	0.45	0.82	0.06		7.12	0.06	0.09			0.12	0.08			27
Lykins Gulch	3 km	21	1.86	0.05		0.05	0.1	0.19			0.66		0.1							3.01
Rabbit North	23 km	22	12.09	0.59	0.05	0.59	0.32	2.95	1.09		3.36		0.14							21.18
Rabbit South	18 km	23	10.79	1.52	0.13	1	0.94	5.65	1.13		1.17		0.03	0.04		0.04	0.04			22.48
South County	32 km	20	9.15	0.1	0.5	0.3	0.35	0.7	0.15	0.05	3.95		0.05			0.1				15.4
Stearns Lake	20 km	19	14.11	0.21		2.26	1	1.53	0.15	0.05	2.84					0.11				21.24
Mean/all routes	145 km		74.12	3.54	1.15	6.7	3.68	12.84	2.88	0.15	20.69	0.06	0.59	0.04		0.37	0.16			125.97
Mean/km			0.515	0.025	0.008	0.047	0.025	0.083	0.02	0	0.146	0	0.004	0		0.002	0.002			0.87

All Raptors Mean number/km



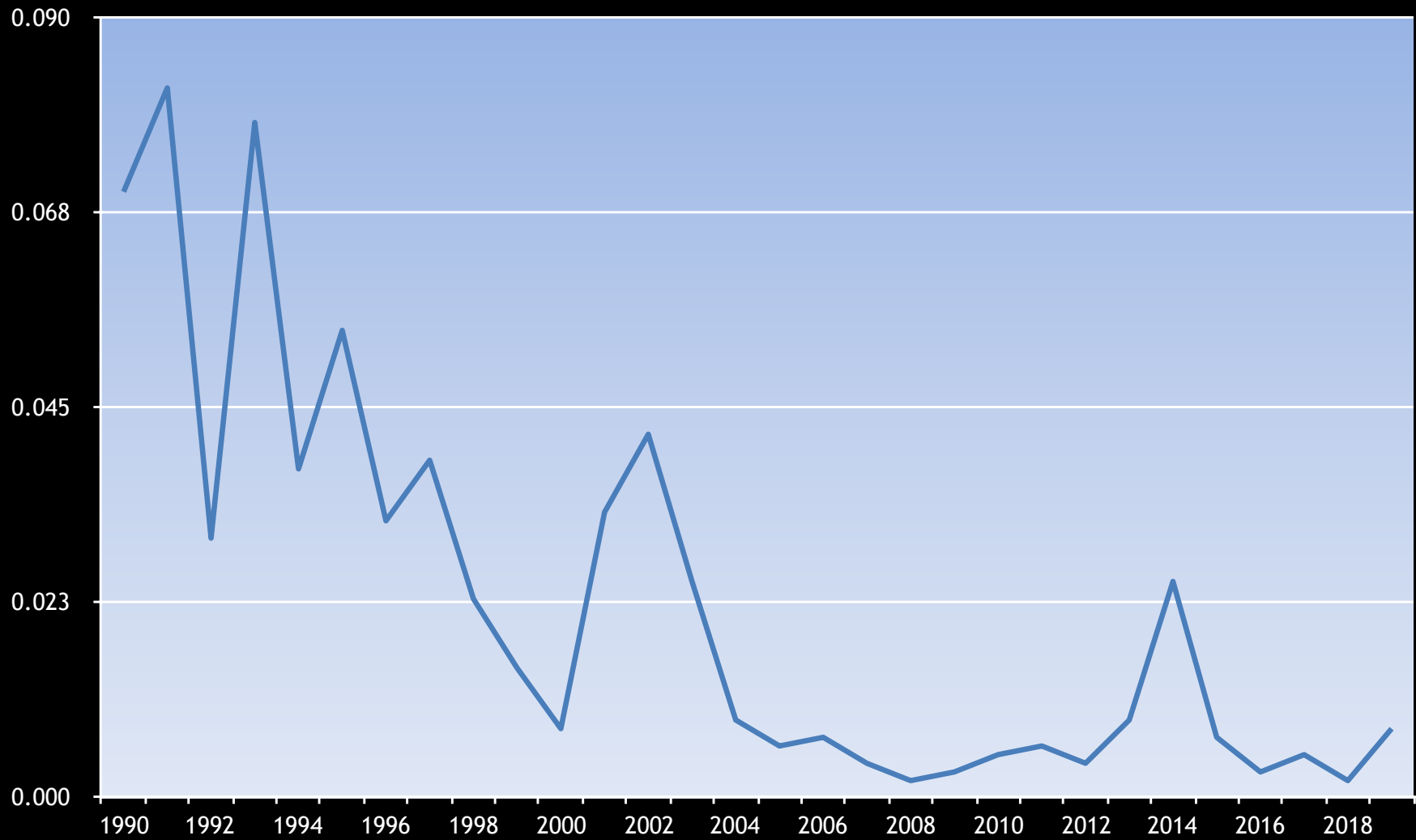
Red-tailed Hawk



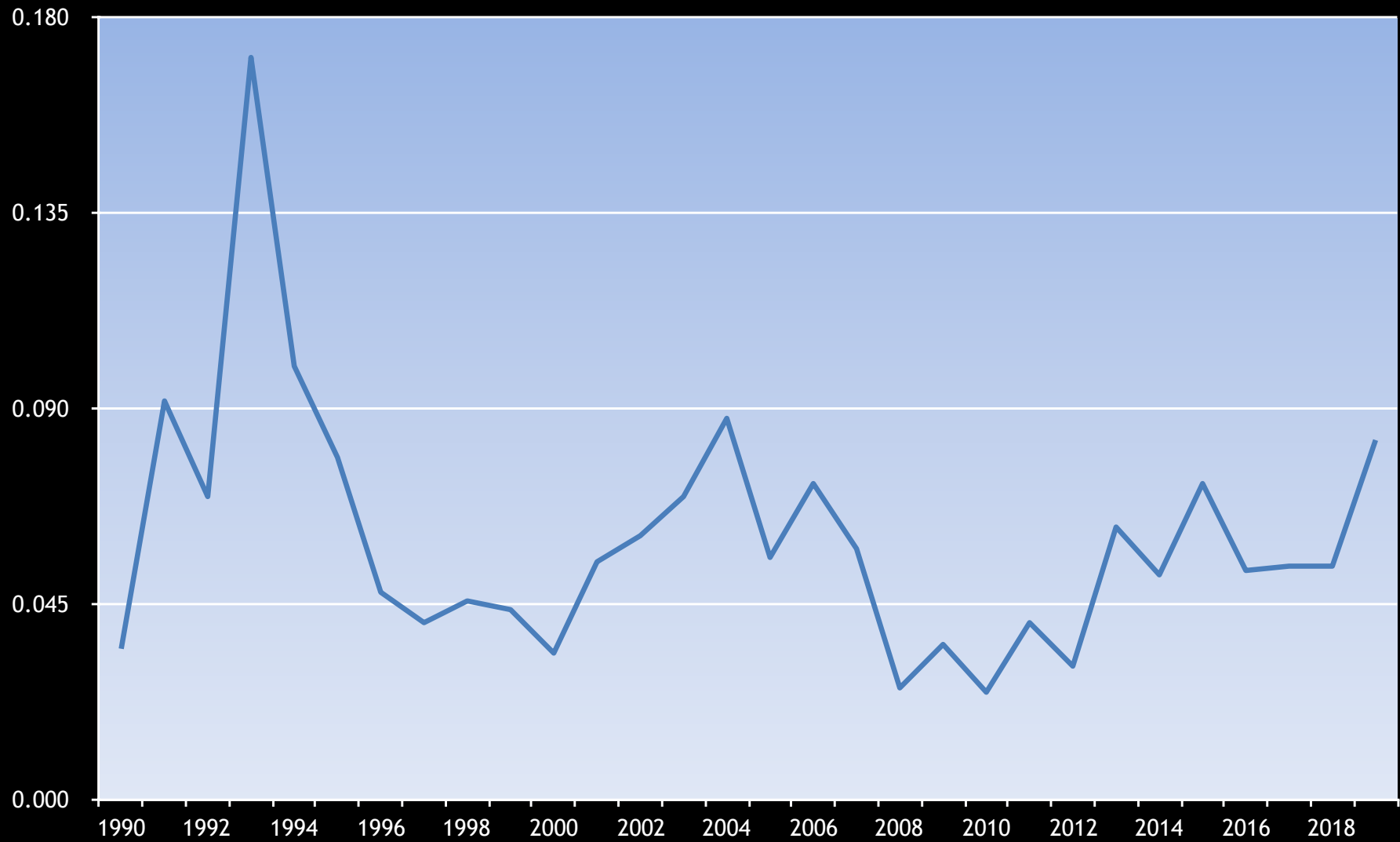
Ferruginous Hawk



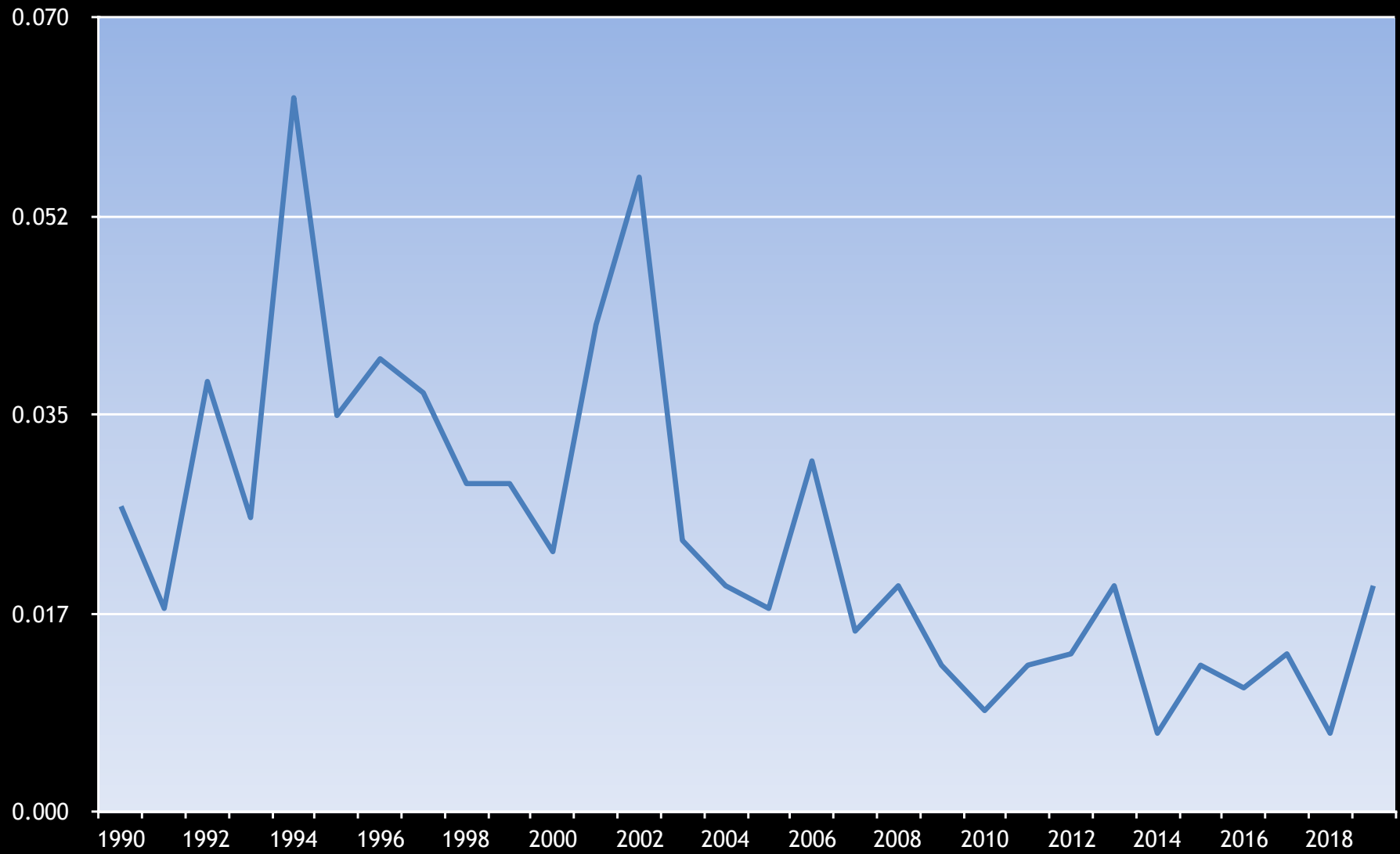
Rough-legged Hawk



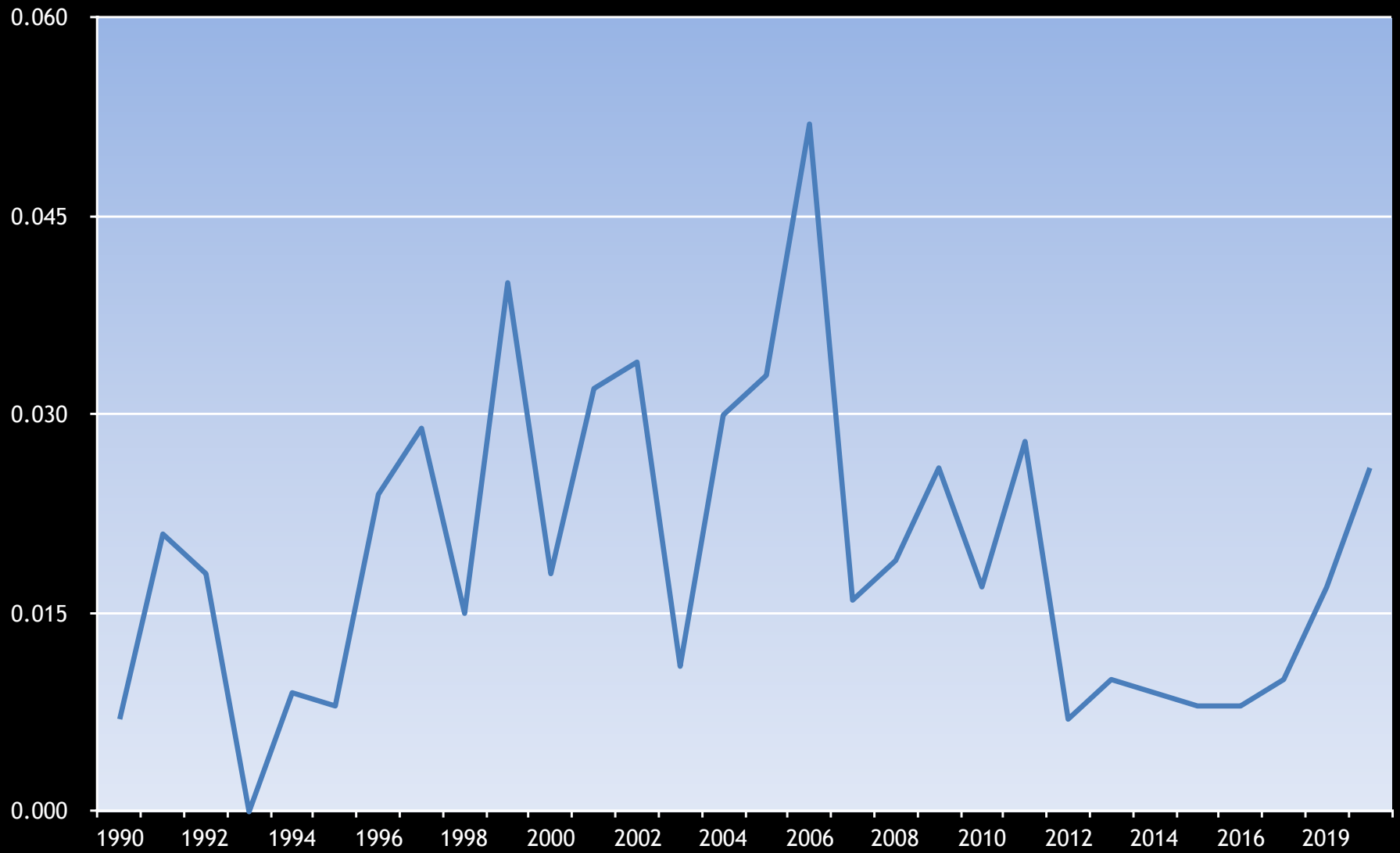
Bald Eagle



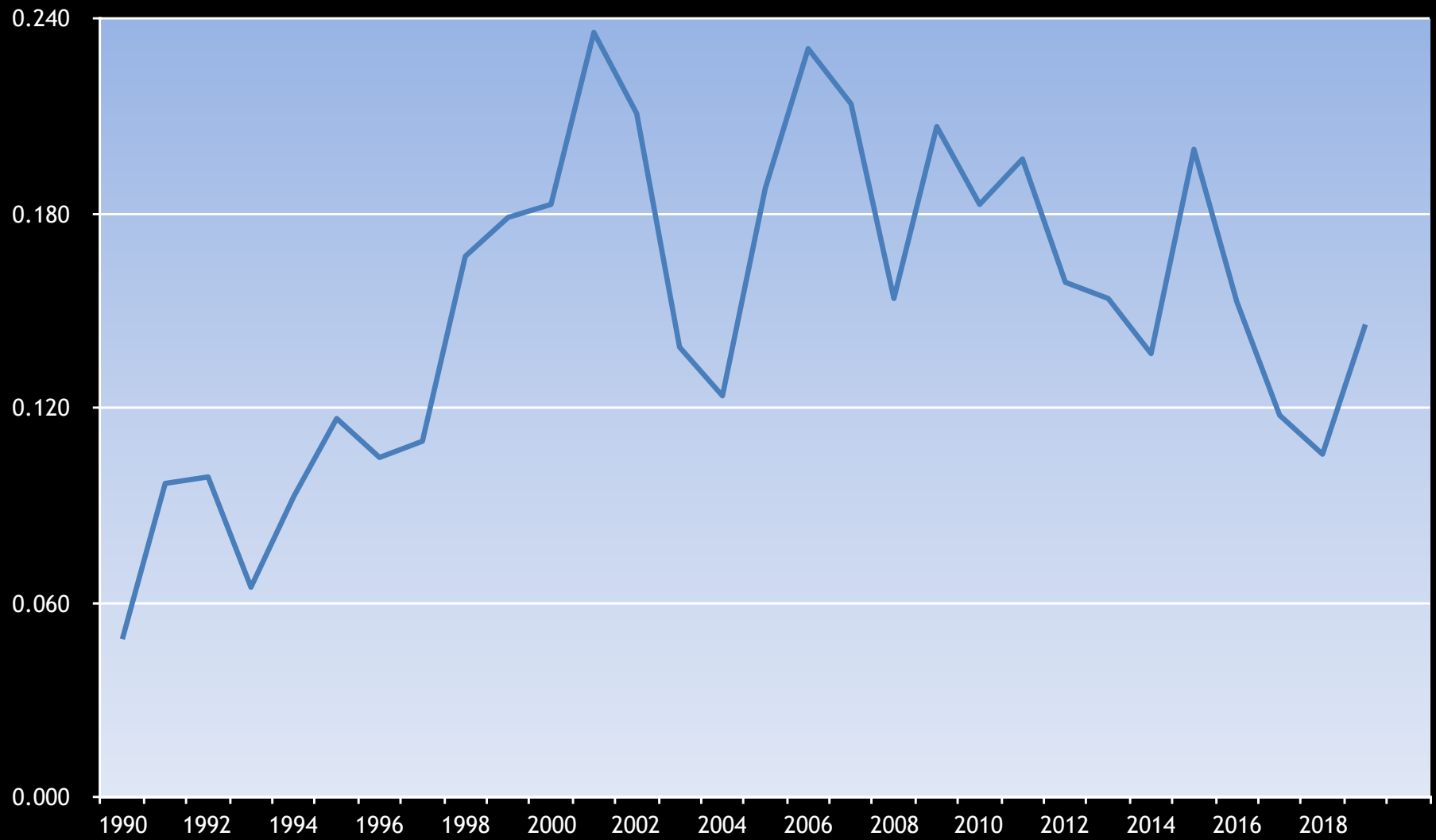
Golden Eagle



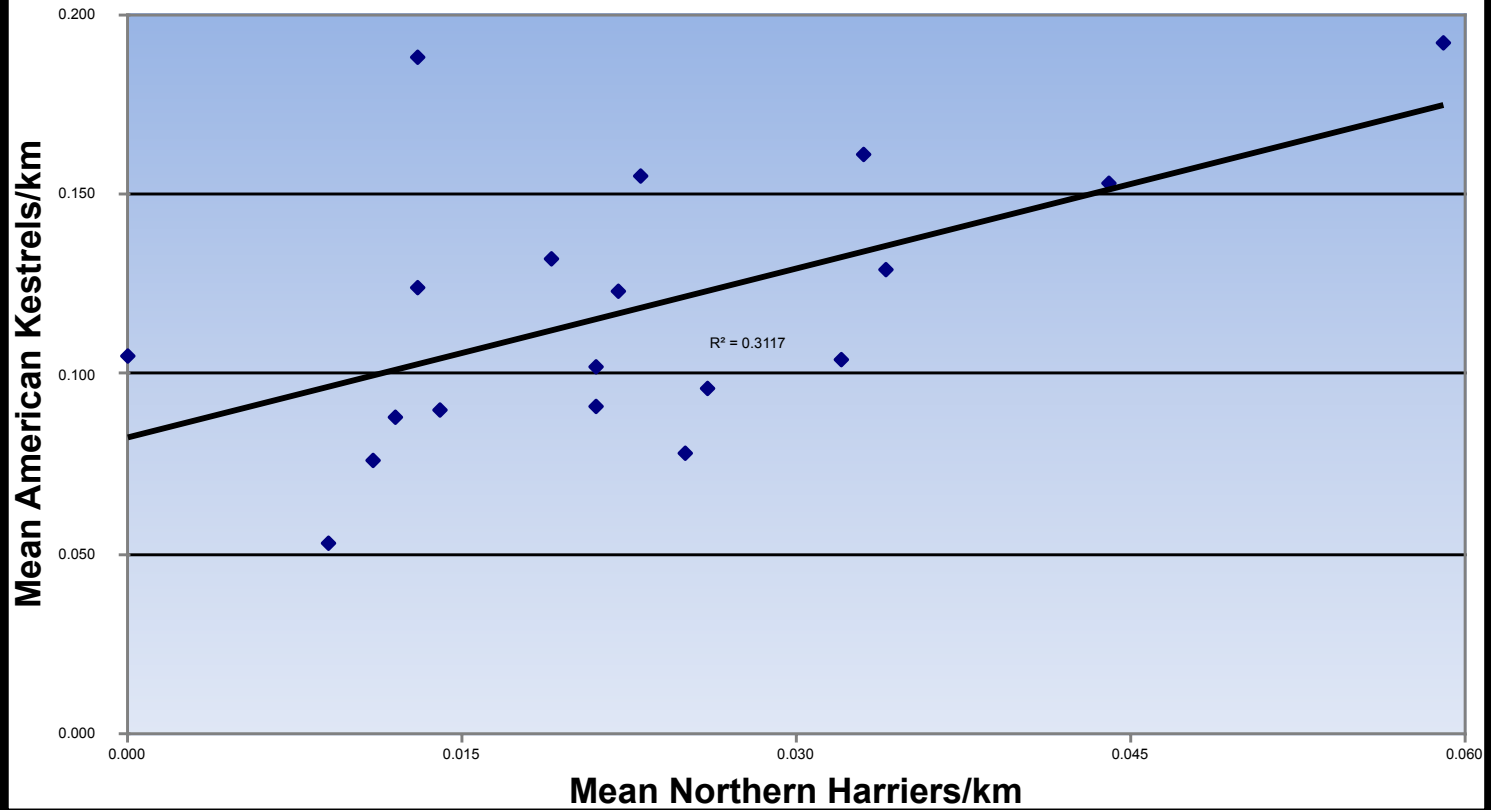
Northern Harrier



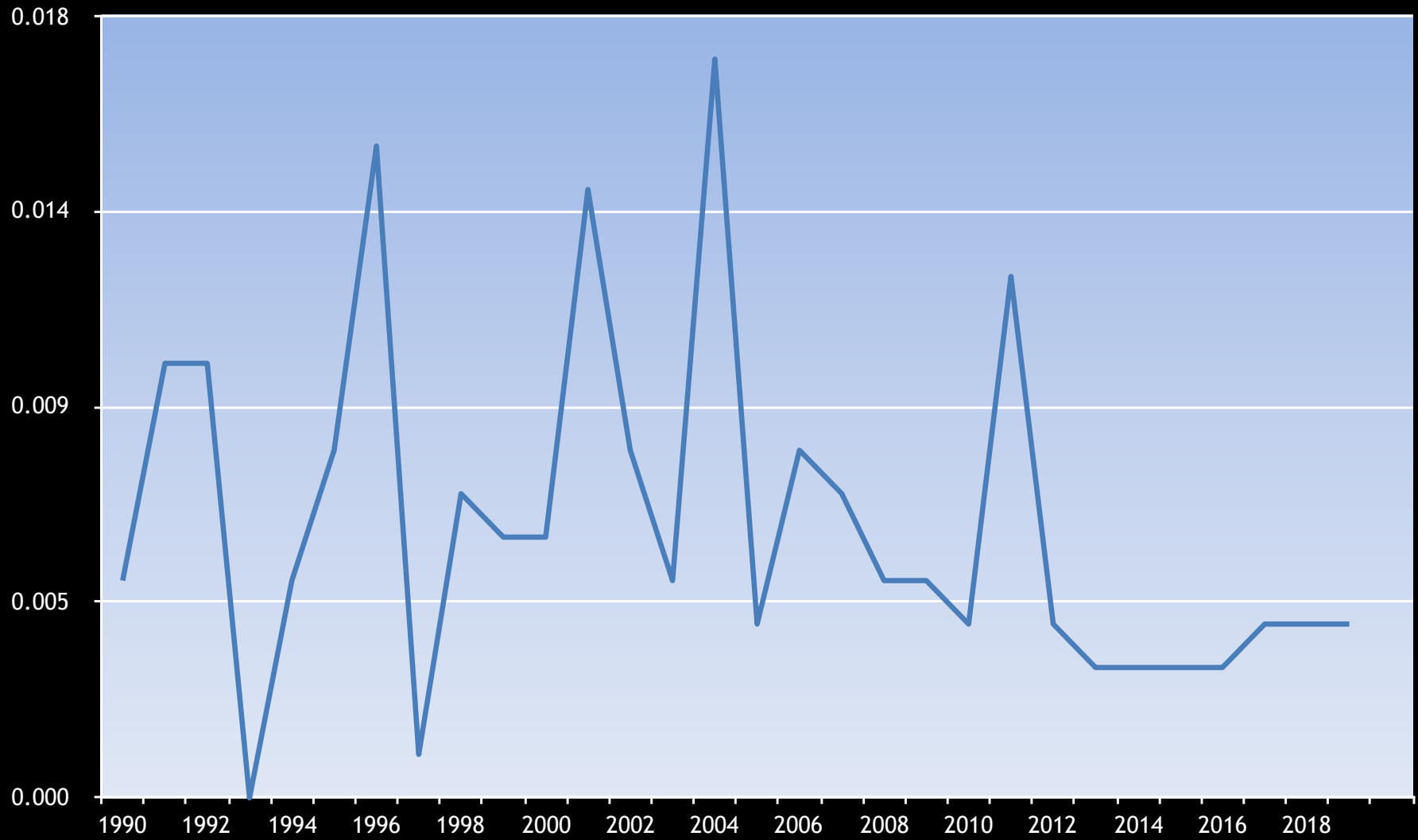
American Kestrel



Northern Harrier and American Kestrel, Original Routes



Prairie Falcon



Red-tailed and Ferruginous Hawks

