CIPARS-VASR: Veterinary Antimicrobial Sales Reporting in Canada

The VASR system collects data annually on volumes of antimicrobials and quantity sold or compounded by animal species and by province/territory. The reporting year reflects data collected for the period of January 1 to December 31.

Last updated: 2024-01-29 PDF CSV

Starting in 2018, the Food and Drug Regulations require manufacturers, importers and compounders to report annual sales of List A ingredients (Health Canada's Category I, II, III, and Uncategorized Medically Important Antimicrobials) intended for use in animals. To meet this requirement, the Public Health Agency of Canada and Health Canada designed and developed the online reporting tool, the Veterinary Antimicrobial Sales Reporting (VASR) system.

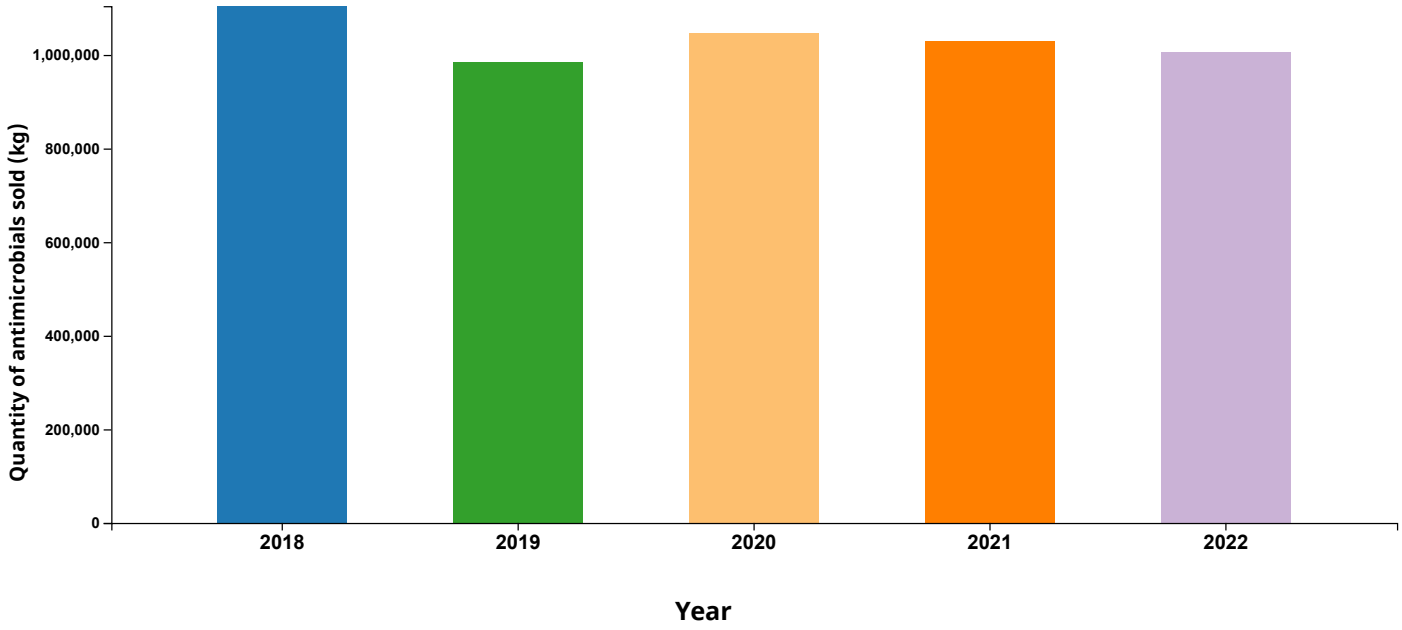
The information on this page includes the quantity of sales (measured in kilograms) of medically important antimicrobials by manufacturers and importers, and excludes compounders (unless otherwise noted).

CIPARS-VASR reports the quantity of antimicrobials sold in four ways: 1) total kilograms, 2) milligrams per Canadian PCU (mg/PCU_{CA}), 3) milligrams per European PCU (mg/PCU_{EU}), and 4) milligrams per biomass at slaughter (mg/$biomass_{SL}$). The population correction unit (PCU) is a measure of animal biomass that accounts for the number of animals and their average weight at treatment (using either average Canadian or European weights). The biomass at slaughter is a measure of animal biomass that accounts for the number of production animals and their Canadian average weight at slaughter. Production animals include both horses and food animals (beef and dairy cattle, veal calves, poultry, pigs, sheep, goats, and aquaculture).

For additional information, please visit the Public Health Agency of Canada's Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) and Health Canada's Veterinary Antimicrobial Sales Reporting (VASR).

The interactive visualizations are updated regularly, and therefore may differ from published CIPARS reports.

Figure 1. CIPARS-VASR: Annual quantity in kilograms of medically important antimicrobials sold by manufacturers and importers for use in all animals, Canada.



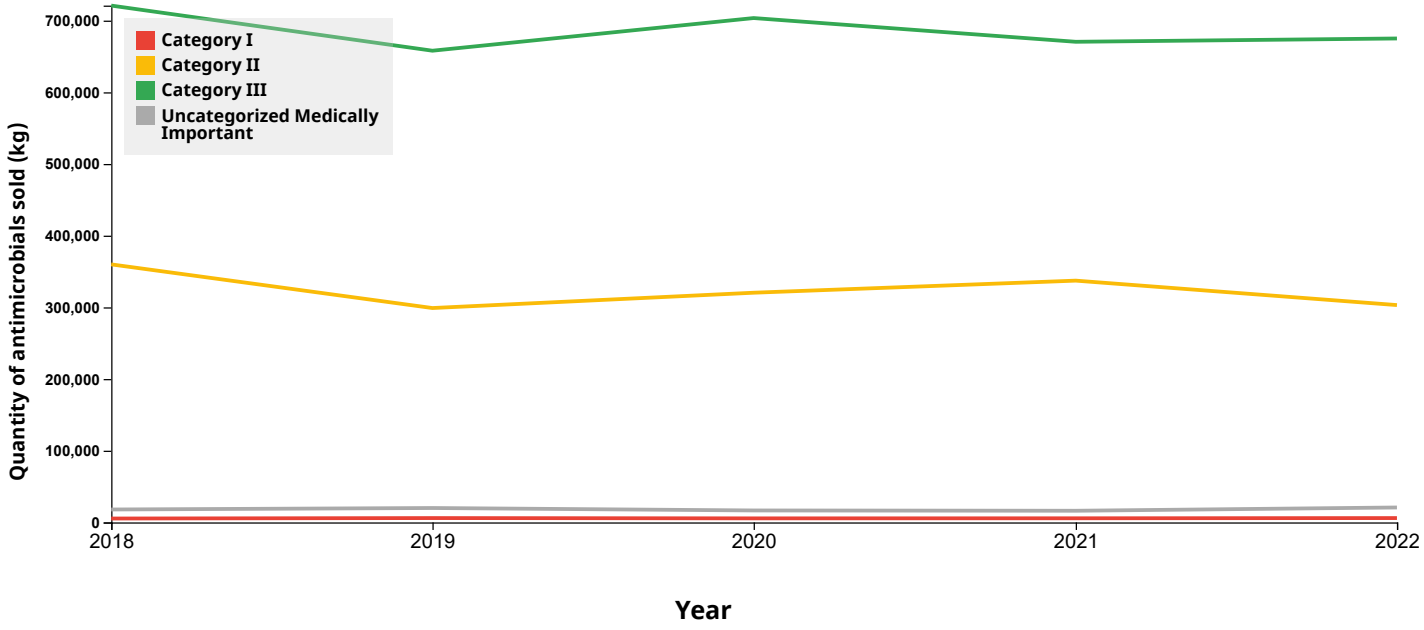
▼ Figure 1: Text description

Table 1. CIPARS-VASR: Annual quantity of medically important antimicrobials sold by manufacturers and importers for use in animals, Canada

Year	Quantity of antimicrobials sold (kg)	
	All animals	Production animals
2018	1,104,339	1,097,900
2019	983,178	975,526
2020	1,046,285	1,037,992
2021	1,029,716	1,021,640
2022	1,005,157	997,148

Figure 2. CIPARS-VASR: Annual quantity in kilograms of medically important antimicrobials sold by manufacturers and importers by Health Canada's Category of Importance in Human Medicine, for use in all animals, Canada.

Hover over the line graph to see the annual quantity of antimicrobials sold by manufacturers and importers. Click on a legend element to add or remove the corresponding lines from the graph.



Health Canada's Categorization of Antimicrobial Drugs based on Importance in Human Medicine

▼ Figure 2: Text description

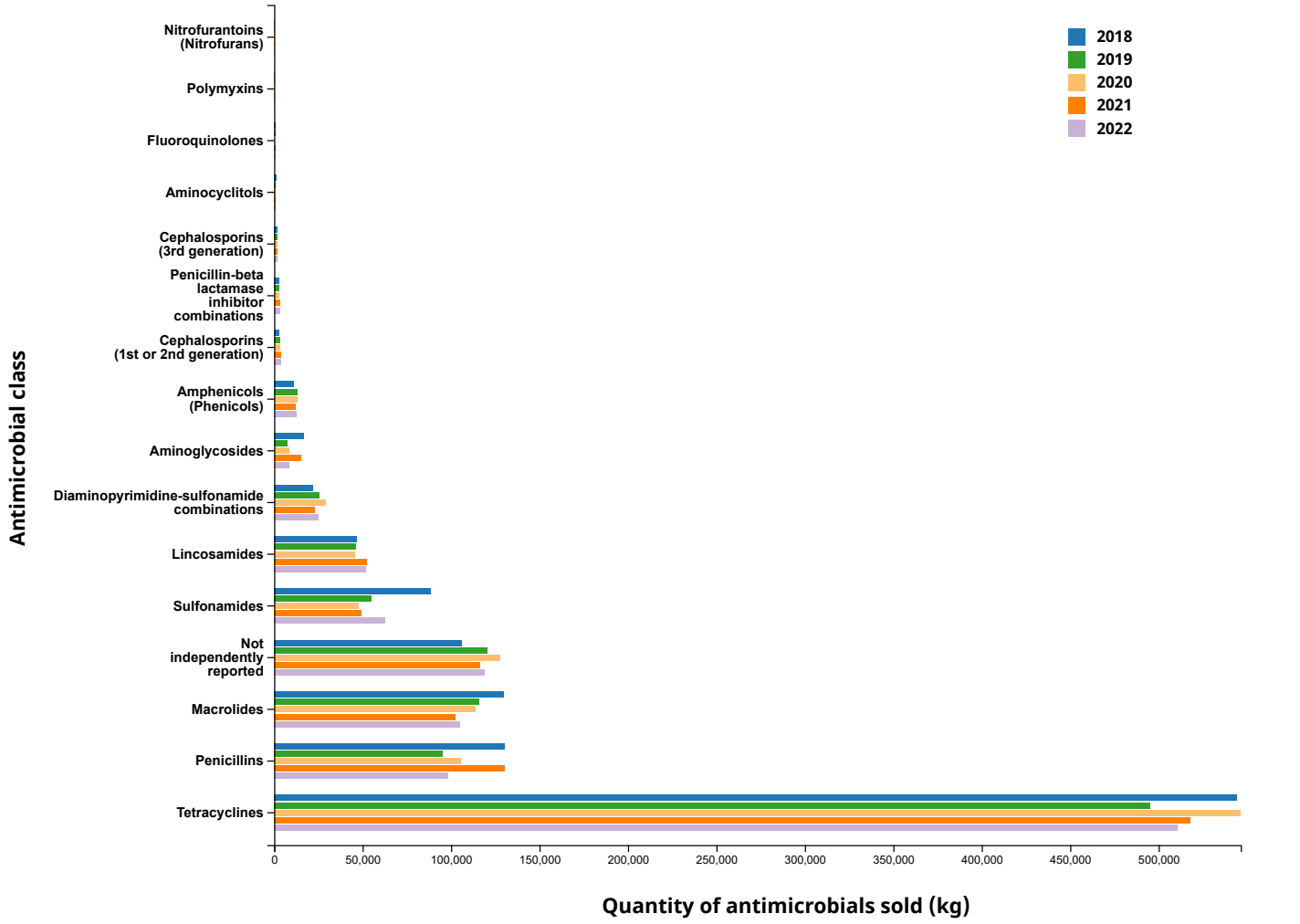
Table 2. CIPARS-VASR: Annual quantity (kg) of medically important antimicrobials sold by manufacturers and importers by Health Canada's Category of Importance in Human Medicine, for use in animals, Canada.

	Quantity of antimicrobials sold (kg) for use in all animals			
Year	Category I	Category II	Category III	Uncategorized Medically Important
2018	5,410	359,940	720,983	18,005
2019	6,037	299,043	658,031	20,066
2020	5,618	320,417	703,587	16,662
2021	5,723	337,276	670,479	16,239
2022	6,036	303,156	675,096	20,800

Figure 3. CIPARS-VASR: Annual quantity in kilograms of medically important antimicrobials sold by manufacturers and importers for use in all animals, by antimicrobial class, Canada.

Add or remove items from the chart below by selecting or deselecting items from this list:

16 Items selected



Antimicrobial classes with fewer than three companies reporting are grouped together as Not Independently Reported (NIR) to prevent identification of individual company's sales volumes. Antimicrobial classes included in NIR: aminocoumarins, bacitracins, diaminopyrimidines, fusidic acid, glycopeptides, nitroimidazoles, orthosomycins, phosphonic acid derivatives, pleuromutilins, pseudomonic acids, streptogramins, and therapeutic agents for tuberculosis.

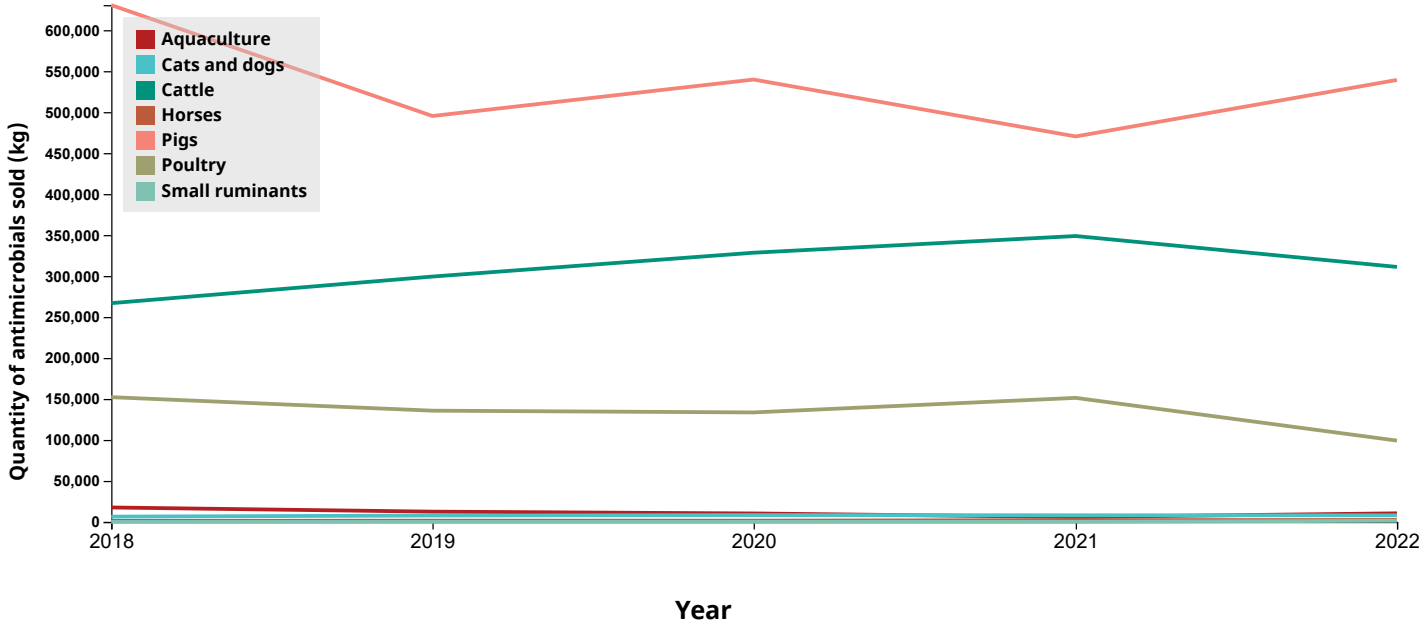
▼ Figure 3: Text description

Table 3. CIPARS-VASR: Annual quantity of medically important antimicrobials sold by manufacturers and importers for use in animals, by antimicrobial class, Canada.

	Quantity of antimicrobials sold (kg) for use in all animals				
Antimicrobial class	**2018**	**2019**	**2022**	**2021**	**2022**
Polymyxins	16	117	5	2	6
Nitrofurantoins (Nitrofurans)	49	23	31	28	44
Fluoroquinolones	716	937	416	652	1,026
Aminocyclitols	1,241	744	918	897	917
Cephalosporins (3rd generation)	1,946	1,676	1,709	1,761	1,712
Penicillin-beta lactamase inhibitor combinations	2,636	2,748	2,915	3,108	3,170
Cephalosporins (1st or 2nd generation)	2,820	3,234	3,500	3,848	3,767
Amphenicols (Phenicols)	11,318	13,030	12,981	12,113	12,489
Aminoglycosides	16,718	7,682	8,290	15,176	8,714
Diaminopyrimidine-sulfonamide combinations	22,051	25,519	29,145	22,720	25,229
Lincosamides	46,583	46,390	45,557	52,543	52,065
Sulfonamides	88,274	54,769	47,667	49,388	62,951
Not independently reported	106,128	120,455	127,738	116,632	118,810
Macrolides	129,654	115,852	113,552	102,681	105,038
Penicillins	130,087	94,972	105,421	130,170	98,400
Tetracyclines	544,102	495,116	546,441	517,998	510,819

Figure 4. CIPARS-VASR: Quantity in kilograms of medically important antimicrobials sold by manufacturers and importers by species, Canada.

Hover over the line graph to see the annual quantity of antimicrobials sold by manufacturers and importers. Click on a legend element to add or remove the corresponding lines from the graph.

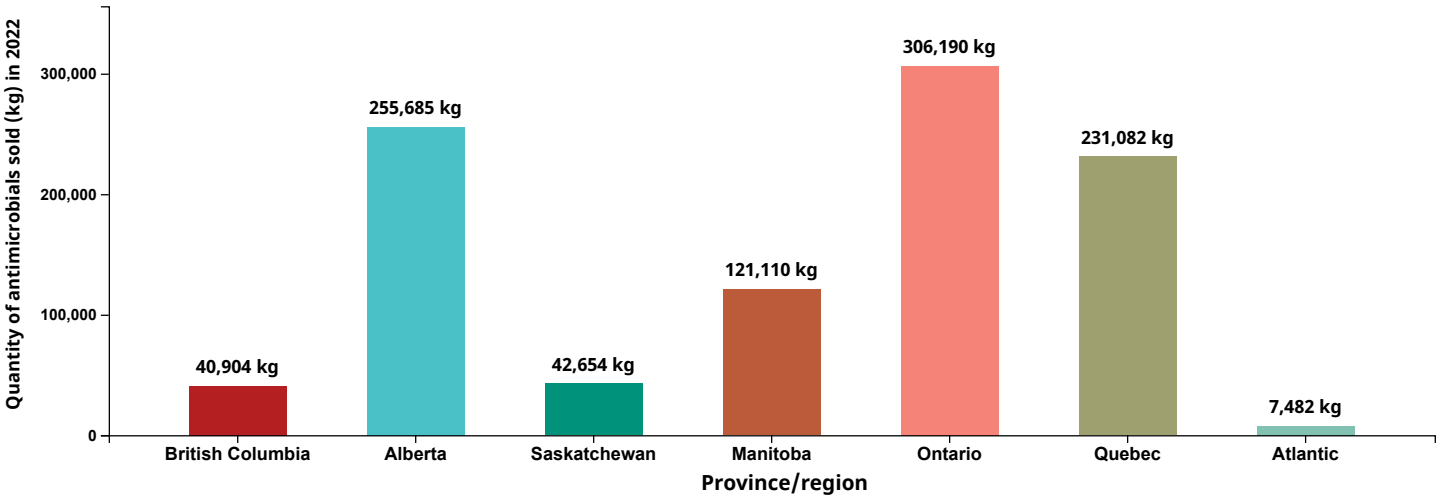


▼ Figure 4: Text description

Table 4. CIPARS-VASR: Quantity of medically important antimicrobials sold by manufacturers and importers by species, Canada.

	Quantity of antimicrobials sold (kg)				
Species	**2018**	**2019**	**2022**	**2021**	**2022**
Aquaculture	17,596	12,507	10,293	5,997	10,433
Cats and dogs	6,439	7,738	8,293	8,076	8,008
Cattle	266,893	299,358	328,448	348,814	311,120
Horses	1,228	1,493	1,498	2,131	2,288
Pigs	630,611	495,276	539,751	470,328	539,276
Poultry	152,185	135,715	133,585	151,322	99,188
Small ruminants	43	68	125	130	1,330

Figure 5. CIPARS-VASR: Quantity of medically important antimicrobials sold by manufacturers and importers, by province, in Canada, in 2022.



The Atlantic Provinces include New Brunswick, Nova Scotia, Newfoundland and Labrador, and Prince Edward Island.

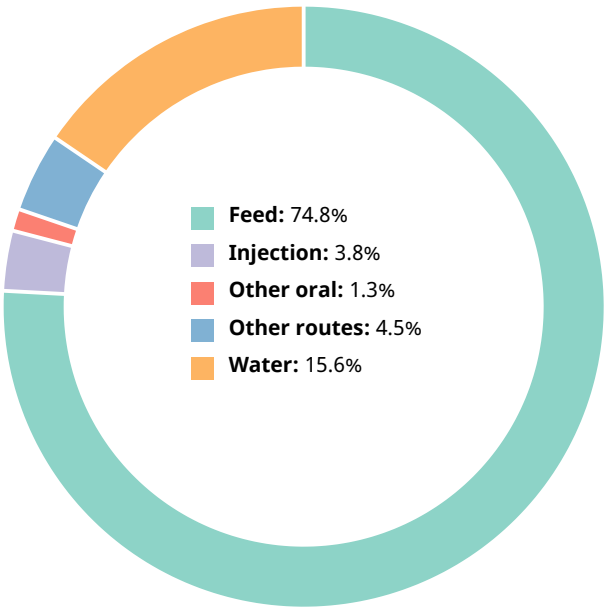
Nunavut and the Territories are excluded due to confidentiality.

▼ Figure 5: Text description

Table 5. CIPARS-VASR: Quantity of medically important antimicrobials sold by manufacturers and importers, by province, Canada.

	Quantity of antimicrobials sold (kg) by year				
Province/Region	**2018**	**2019**	**2022**	**2021**	**2022**
British Columbia	53,747	42,727	40,989	38,068	40,904
Alberta	236,850	261,043	241,517	243,131	255,685
Saskatchewan	39,006	41,907	45,294	37,265	42,654
Manitoba	152,238	98,227	116,138	122,512	121,110
Ontario	314,710	297,342	354,199	355,929	306,190
Quebec	246,835	232,658	238,750	224,224	231,082
Atlantic	9,168	8,044	8,066	8,473	7,482

Figure 6. CIPARS-VASR: The percentage of total sales (in kg) of medically important antimicrobials by manufacturers and importers, by route of administration, in Canada, in 2022.



Other oral includes tablets, capsules, boluses, oral paste and oral powders/solutions for individual administration.

Other routes includes topical, ophthalmic, otic, intramammary, intrauterine and other routes.

▼ Figure 6: Text description

Table 6. CIPARS-VASR: The percentage of total sales (in kg) of medically important antimicrobials by manufacturers and importers, by route of administration, Canada.

Route of administration	Quantity of antimicrobials sold (kg) by year				
	2018	2019	2022	2021	2022
Feed	70.0%	73.0%	74.0%	72.0%	74.0%
Injection	3.0%	4.0%	3.0%	3.0%	3.0%
Other oral	1.0%	1.0%	1.0%	0.0%	1.0%
Other routes	2.0%	2.0%	2.0%	3.0%	4.0%
Water	22.0%	18.0%	1.0%	19.0%	15.0%

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