



VILLAGE OF SILVERTON

COMMITTEE OF THE WHOLE

COUNCIL AGENDA

SILVERTON COUNCIL CHAMBERS – VILLAGE OFFICE – 421 LAKE AVE.

October 29, 2019

4:00 pm

A. CALL TO ORDER

B. THE VILLAGE OF SILVERTON ACKNOWLEDGES THE INDIGENOUS PEOPLES ON WHOSE TRADITIONAL TERRITORIES WE STAND

C. ADDITION OF LATE ITEMS IF ANY

D. DELEGATION

E. DISCUSSION

E1. Wildsafe, human and wildlife conflict mitigation RE: Rats

F. ADJOURNMENT

HUMAN-RAT CONFLICTS

- Rats are not native to BC and tend to thrive only in urban areas or areas where food is abundant and winters are mild.
- Rats can cause significant damage to gardens, buildings, crops, and livestock in their search for food and denning sites. Rats cause damage both from feeding on crops but also from gnawing through structures, including electrical wires.
- Rat populations are spreading throughout the southern interior of BC. Getting ahead of the spread is key to being able to minimize the problems associated with large rat populations.
- Controlling food sources and limiting denning areas are key to keeping rats in check - trapping is, at best, a stop-gap measure.
- Children should be taught not to approach any wildlife; serious bites and scratches may result from an encounter with a rat.



British Columbia Conservation Foundation



The BC Conservation Foundation is a not-for-profit, registered charity that has been working in BC since 1969. To learn more about our organization please visit us at

www.bccf.com

WildSafeBC is funded through partnerships throughout BC. Core funding is made possible through the BC Ministry of Environment and Climate Change Strategy. To report wildlife in conflict contact the Conservation Officer Service:

1.877.952.7277



Ministry of Environment and Climate Change Strategy

www.wildsafebc.com

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RATS



British Columbia Conservation Foundation





MANAGE YOUR ATTRACTANTS

Rats are attracted to a wide variety of foods, and although they are good climbers and can get into relatively small spaces they can still be dissuaded from visiting your property.

1. **Keep all garbage securely stored until the day of collection.** Garbage should be stored in a secure container which should be cleaned on a regular basis.
2. **Feed pets indoors,** or if fed outdoors, bring in any feed that is not immediately eaten by your pets. Rats will quickly target any type of pet food left out.
3. **Take birdfeeders down at night and feed only during winter months.** Birdfeeders attract a wide variety of wildlife and rats can climb along wires, ropes or steel posts. Be sure to clean up ALL spilled seed under the bird feeder. As rats are nocturnal, taking the feeder in at night will minimize the potential for rats accessing the feed.
4. **Manage your compost properly and turn regularly.** Ideally you will use a rat-proof composter, but lacking that, turn your compost on a regular basis - right to the bottom to ensure that rats cannot nest underneath the compost. Line the bottom of your compost with wire mesh to exclude rats.
5. **Engage with your neighbours.** If you have rats on your property there is a good chance your neighbour does as well. Rat issues need to be addressed on a block-wide basis.

! RAT SAFETY

Rats should never be handled directly as they have very sharp teeth and a bite or scratch from a rat needs to be checked out immediately by a professional.

Rats can carry a wide variety of diseases that can be transmitted to humans either through direct contact (bites or scratches) or via indirect means such as contamination by urine or feces.

When disposing of a dead rat or cleaning up after a rat infestation, be sure to wear appropriate protective equipment, such as rubber gloves and a mask - consult the BC Centre for Disease Control for proper protocols.

Rats are **NOT** a species that the Conservation Officer Service deals with. Contact a local, reputable pest control agent if you need assistance with removing rats.



Rats, once limited to coastal BC communities are now found inland as far east as the Kootenays and as far north as Kamloops. Rats may be living in more northerly locations but have yet to be reported.

Rats are, with good reason, considered a species of great concern for many home owners in BC. Rat populations, once established, can increase exponentially in a very short period of time. Concern around the rat's historical role in spreading disease and its voracious appetite for many of our crops, make it an animal we need to defend against.

Rats were introduced to BC in the mid 1800's and were originally centered around port cities. In the past number of years, rat populations in urban areas in the southern half of the province have been on the increase.

Because of the rats' negative influence on native wildlife (most notably ground-nesting birds), eradication programs have taken place on islands where rats have established themselves. It is in a home owner's best interest to keep a rat population from establishing itself in the first place; prevention is easier than eradication.

Rats will have a nest or den from which they will leave to go on nightly foraging expeditions. Normally, rats will forage within 100m of their den but can travel longer distances if food is scarce.

Rats are very adaptable when it comes to choosing a food supply and learn from their neighbours' specific foraging techniques. Some rats can even fish and dive for food like mussels and fingerlings.

! WHERE'S THE RAT?

While we don't track rats on our Wildlife Alert Reporting Program (WARP), you can use the program to learn about other unwanted visitors to your yard. By knowing where wildlife is and what is bringing it in, we can all do our part to keep wildlife wild and our communities safe.

www.wildsafebc.com



RAT FACTS:

- Rats (members of the genus *Rattus*) were introduced to BC via boat traffic in the mid-1800s.
- There are two types of rats in BC: The Norway rat (*Rattus norvegicus*) and the roof rat (*Rattus rattus*).
- Rats can grow up to 50cm in length with about half of that being a tail that is devoid of hair.
- The Norway rat has a larger body than the roof rat, but conversely the roof rat's tail is longer than the Norway rat's tail (relative to the body size).
- Owls, hawks, foxes, coyotes, and weasels prey upon rats; snakes eat immature rats.
- Rats are killed by vehicles, traps, poisons, or other rats. Some domestic cats and dogs capture rats, usually small ones.
- Rats are usually associated with urban environments but also survive along the coast where winters are not as severe.
- Rats are prodigious breeders and a pair of rats could theoretically produce over 900 offspring within a single year.
- Rats are short lived and usually only survive a little over a year outside of captivity.
- Rats are omnivores (meaning they eat both meat and plant materials), but focus primarily on vegetation, including grains, fruits and vegetables.



www.wildsafebc.com

THE CORPORATION OF THE VILLAGE OF SILVERTON

Bylaw No. 433 - 2005

A Bylaw to provide for the control, collection and disposal of garbage, household and trade waste within the Village of Silverton and for establishing a scale of charges therefore.

The Council of The Corporation of the Village of Silverton, in open meeting assembled, enacts as follows:

Title:

- 1. This bylaw may be cited as "Garbage Collection and Control By-law No. 433 - 2005".

Repeal:

- 2. "The Corporation of the Village of Silverton Garbage Collection and Disposal Bylaw No 426, 2003" and all amendments thereto are hereby repealed.

Definitions:

- 3. (a) "Dwelling" shall mean any building or place occupied as a residence but does not include hotels or motels.
(b) "Garbage" shall mean and include any trade waste and all household wastes but does not include garden refuse, cardboard, appliances or hazardous or contaminated waste.
(c) "Garbage Collector" shall mean the Public Works Department or any person(s) appointed for such service, or contract as approved by Council.
(d) "Garbage Container" shall mean a plastic bag not exceeding 31"x 48" (79 cm x 122 cm) or a receptacle provided with a good water-tight cover and lined with a garbage bag, not exceeding the maximum bag size.
(e) "Industrial Waste" shall mean material from excavations; material from lot clearing or building construction, repairs, alterations, or maintenance; debris from any building removed or damaged or destroyed by fire or any other cause; material from any manufacturing processes; dead animals; condemned or contaminated matter from any premises; (and any similar material other than human or animal excrement).
(f) "Owner or Occupier" shall mean and include the agent of an owner.
(g) "Trade Waste" shall mean refuse and accumulation of waste and abandoned material resulting from the operation of a business, with the exception of cardboard, appliances, hazardous waste or contaminated goods.
(h) "Trade Premises" shall mean any warehouse, factory, store, restaurant, hotel/motel, wholesale or retail business place, or office block, and any building other than a dwelling or apartment house.

General Regulations:

4. It shall be lawful for the Village to equip, maintain and operate a system of garbage collection within the Village and such areas outside the Village limits as Council deems necessary. Such outside areas can be determined and amended from time to time by resolution of Council.
5. No garbage, waste or refuse may be disposed of on any street, lane, alley, public place or vacant lot within the Village of Silverton.
6. No liquids or free water shall be put on, placed in or allowed to run or accumulate in any regulation garbage containers, and all such regulation garbage receptacles shall, at all times, be kept securely covered with a water-tight cover.
7. No person shall place any explosive substance in any garbage container.
8. Garbage containers shall be equipped with tight fitting, fly proof lids. All garbage shall be placed in plastic garbage bags before placing in the container. Maximum size of all plastic garbage bags shall not exceed 31"x 48"(79 cm x 122 cm). All bags must be tied.
9. Notwithstanding anything herein before set out, in the case of all buildings other than dwellings as hereinbefore defined and in all cases of all campgrounds the garbage may be of such other shape, nature or capacity as the Council may approve and shall be placed and located in such places as Council may approve or designate.
10. All garbage containers shall be placed for collection in the designated locations as directed by the Village under this bylaw prior to 8:00 a.m. on each collection day, but shall not be placed more than 3 hours in advance of 8:00 a.m.
11. Every owner or occupier within the Village may be compelled to make use of the disposal and collections system established by the Village and shall pay for such collection of garbage as herein set out in Schedule "A" - attached hereto and forming part of this Bylaw.
12. Garbage shall be picked up by the disposal and collection service of the Village regularly each week, however the regular pick-up schedule may be altered provided three (3) days notice of the change is given by the Village.
13. It shall be a violation of this bylaw for anyone to place out, or allow to be placed out for collection, any household garbage, rubbish or trade waste which has been brought into the Village from any place outside the Village boundaries.
14. No person shall place out or cause or permit to be placed out for collection, any household garbage, rubbish or trade waste in combination with or in place of another person's garbage.
15. Notwithstanding any other provisions of this bylaw, where a recycling program is in effect and storage or other recycling facilities are available, either within the Village or elsewhere, the following shall be either recycled or otherwise disposed of in accordance with this bylaw:
 - (1) Aluminum and tin cans;
 - (2) Corrugated cardboard;
 - (3) Glass bottles and jars;
 - (4) Motor oil;
 - (5) Paper;

- (6) Magazines and catalogues; and
 - (7) All other material as may, from time to time, be accepted for recycling
16. (a) In accordance with Schedule "A" of this Bylaw, owners or occupiers of dwellings or trade premises shall:
- (i) In the case of dwellings, industrial premises or churches, be permitted one (1) day per week for collection,
 - (ii) In the case of hotels; motels, resorts; restaurants; service stations; schools; large retail; grocery stores; small retail and dental clinics, be permitted two (2) days per week for collection.
- (b) Subject to clause (a) of this Section, the Village shall be responsible for removing on collection day, only the contents of garbage containers which clearly display official tags sold by the Village. Removal and disposal of the contents of garbage containers which do not clearly display official Village tags shall be the sole responsibility of the owner or occupier of the premises which produced the garbage.
- (c) Official tags will be sold by the Village for a cost, outlined in Schedule "A".
- (d) On a plastic bag, the official tag shall:
- (1) be firmly affixed to the side of the bag;
 - (2) be whole, unaltered, unobscured and clearly visible to the garbage collector.
- (e) On garbage contained in a garbage container, the official tag shall:
- (1) be firmly affixed to the top of the garbage bag in the garbage container;
 - (2) be whole, unaltered, unobscured and clearly visible to the garbage collector immediately upon removing the garbage container lid.
17. (a) Containers consisting of plastic bags may be used for the disposal of garbage in place of garbage containers under the following conditions, and unless the context otherwise requires, references to a garbage container in this bylaw shall include a plastic bag.
- (b) Plastic bags containing garbage shall be kept in a structure, fenced area, stand or other enclosure except when otherwise placed for collection.
- (c) Plastic bags containing garbage shall be in good repair and be kept securely closed except when garbage is being placed therein, and any garbage from an open or damaged plastic bag shall be promptly removed from any public or private property and placed in another garbage container by the owner or occupier on whose premises the garbage or trade waste was generated.
- (d) Under no circumstances shall plastic bags of garbage or trade waste be placed or kept on any street or public land other than on garbage or trade waste collection day.
18. When a stand is used for the storage of garbage or trade waste provided for in this bylaw, and while the stand is on the owner's premises, the owner or occupier of the premises shall be responsible for maintaining the stand in a condition which is not offensive or dangerous to public health.
19. Where Council considers it to be in the public interest to do so, the Village may temporarily place one or

more stands on public or private lands to accommodate garbage or trade waste expected to be generated at a special event or function. Council may, at its discretion, establish a fee for the temporary placement, use, and removal of stands under this Section.

20. The owner or occupant of any premises shall at all times ensure that garbage or trade waste is kept within the garbage or trade waste containers and stands provided for that purpose, and not allowed to spill onto, or accumulate on, any street or adjoining public or private property.
21. Where any premises is served by a lane, all garbage or trade waste from such premises shall be placed in containers for collection at a location within 2 metres of such lane, but not in the lane.
22. Where any premises is not served by a lane, all garbage from such premises shall be placed in containers for collection at a location as close as possible to the traveled portion of an adjacent street, but not on a sidewalk or in such a location as to interfere with vehicular or pedestrian traffic.
23. Where garbage containers are placed for collection within any structure, fence, stand or other enclosure, direct access to the garbage containers from a street or lane shall be provided.
24. Where special arrangements have been made for on-site collection, a passageway and ready means of access from a street or lane shall be maintained at all reasonable time, and such means of access shall be unobstructed and of sufficient size to provide safe and convenient access to the garbage collector and equipment. Where the garbage collector is required to access any building or structure designed to accommodate garbage containers, the access door or gate shall not be less than 1.8 metres (70.8 in.) in height, nor less than 750 mm (29 inches) in width.
25. Except on the day of collection, all garbage containers shall be kept and maintained on the owners premises and any garbage container located on any street, lane or other public land in the Village may be removed and disposed of at the discretion of the Village without compensation to the owner thereof.
26. Any person designated by Council for the collection and removal of garbage shall have the right to enter all premises and yards at all reasonable times, to the extent necessary for the performance of their duties in accordance with this bylaw.
27. No person, other than the owner, a lawful user of, the Village garbage collector, or any other person authorized by Council, shall open any garbage container or stand, remove anything therefrom, add anything thereto, or in any way disturb the contents thereof; nor shall any other person handle, interfere with or in any manner disturb any garbage container placed for collection.
28. When any garbage container is in a condition that presents a hazard to the garbage collector or has been condemned by the Village for any other reason, and written notice to that effect has been given to the owner or occupier, the condemned garbage container may be removed and disposed of along with the garbage from that premises.
29. No person shall operate a vehicle in the Village while it is carrying garbage or industrial waste unless the portion of the vehicle in which the garbage or industrial waste is being carried is securely covered or is secured to prevent any part of such garbage or industrial waste from falling off, or out of the vehicle while in transit.
30. The removal of industrial waste from any premises and the full cost thereof, shall be the sole responsibility of the owner or occupier of such premises.
31. The Village may suspend garbage collection services from properties where stands, or their locations for collection, do not comply with the requirements of this bylaw, **PROVIDED HOWEVER**, that such suspension shall not relieve the owners or occupiers of such premises from their responsibilities under

this bylaw.

32. An owner or occupier of premises **may make private arrangements** for the collection and disposal of garbage, refuse waste, industrial waste or other material, **PROVIDED HOWEVER**, that the provisions of this bylaw shall apply to the accumulation of all such garbage, refuse, waste, industrial waste or other material on the premises.
33. Unless special arrangements have been made with the Village to do so, the Village shall not collect or remove any of the following:
 - (1) Industrial waste;
 - (2) Discarded furniture, appliances or other household equipment;
 - (3) Tree limbs more than 50 mm (2 in.) In diameter, or whole bushes or hedges;
 - (4) Waste oil or other petroleum products;
 - (5) Gravel, sand, rocks or bricks;
 - (6) Discarded material of any kind which weighs more than 10 kg. (23 lbs.), or is more than 1.8 meters (70.8 in.) In length; or
 - (7) Discarded or abandoned vehicles or equipment or parts thereof, including tires, batteries, etc.;
 - (8) Corrugated cardboard.
34. A garbage collector shall not enter any building for the purpose of carrying from or returning thereto any garbage container, except where in the opinion of the Village, it is impractical to store the garbage container outside the building.

Fees:

35. (a) Every occupier or owner as hereinbefore defined and every owner of an apartment house or trade premises within the Village shall pay to the Village Collector fees and charges for the removal of garbage as set out in Schedule "A" of this Bylaw.
- (b) All garbage collection fees and charges for the current year remaining unpaid after the thirty-first day of December of that year shall be deemed to be taxes in arrears and shall forthwith be entered on the real property tax roll as taxes in arrears against the property to which the garbage rates apply.
- (c) Residential and Trade premises wishing to dispose of garbage in excess of the volumes allowed in Schedule "A" shall be assessed on the volume and number of pickups involved. The amount of the assessment shall be left to the sole discretion of the Village.

Appointment and Duties of Garbage Collector:

36. The Village may from time to time appoint some person or persons to act as Village Garbage Collector or Garbage Collectors and to provide for their remuneration and to define their duties.
37. It shall be the duty of the Garbage Collector:
 - (a) To regularly collect all garbage from regulation garbage containers.
 - (b) To report any violation of sanitary laws by citizens.
 - (c) To clean up any garbage spilled or scattered in the operation of garbage collection.

- (d) To answer all complaints courteously and promptly.
- (e) Not to trespass on private property but to follow pedestrian walks and not cross from one property to another.
- (f) To have his vehicle washed, cleaned and disinfected to such a degree and at such intervals as will meet the requirements of the Public Health Inspector.
- (g) To have all garbage collection equipment accessible to the Public Health Inspector at all times.
- (h) To ensure that garbage collection vehicles do not interfere needlessly with traffic and that such vehicles are not left standing on the street.
- (i) To abide by all Federal, Provincial and local laws and requirements.

Compliance With Other Bylaws:

38. Nothing in this Bylaw shall relieve any person from complying with the provisions of any other Bylaw of the Village of Silverton.

Effective Date of Bylaw:

39. This bylaw shall come into force and take effect upon its adoption by Council.

READ A FIRST TIME this 25th day of October, 2005.

READ A SECOND TIME this 25th day of October, 2005.

READ A THIRD TIME this 25th day of October, 2005.

RECONSIDERED AND ADOPTED the 08th day of November, 2005.

Administrator

Mayor Tim Wiseman

Certified a true and correct copy of
"Garbage Collection and Disposal
Bylaw No. 433 - 2005"

Administrator

THE CORPORATION OF THE VILLAGE OF SILVERTON

Bylaw No. 433, 2005

Schedule "A" (2005)

	<u># of pickups per week</u>	<u>Annual Charge</u>
1. Residential:		
a) Private Dwelling	1	\$75.00
b) Apartment	1	75.00
2. Hotels:	2	150.00
3. Motels, Resorts:	2	150.00
4. Restaurants:	2	150.00
5. Service Stations:	2	150.00
6. Schools:	2	150.00
7. Large Retail:	2	150.00
8. Grocery Stores:	2	150.00
9. Small Retail:	2	150.00
10. Dental Clinics: (excluding hazardous waste)	2	150.00
11. Industrial:	1	75.00
12. Churches:	1	75.00

Any containers (bags) will only be collected if a tag has been purchased from the Village Office. All tags to be placed on bags visible to the Collector.

On an annual basis, at the time of Utility Billing, each Residence shall be given 55 official tags and each Business shall be given 110 tags.

Additional tags may be purchased at the Village Office for the fee of \$2.00 per tag

THE CORPORATION OF THE VILLAGE OF NEW DENVER
 CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

A bylaw to provide for the collection and
 removal of solid waste within the Village of New Denver

WHEREAS Section 64 of the Community Charter provides that Council may, by bylaw:

- a) Require persons to use a waste disposal or recycling service, including requiring persons to use a waste disposal or recycling service provided by or on behalf of the municipality;
- b) Require owners or occupiers of real property to remove trade waste, garbage, rubbish or other matter from their property and take it to a specified place;
- c) Require the emptying, cleaning and disinfecting of private drains, cesspools, septic tanks and outhouses, and the removal and disposal of refuse from them;

AND WHEREAS the Council wishes to encourage waste reduction, reuse, composting and recycling to reduce the volume of waste being deposited in the landfill;

NOW THEREFORE the Council of the Corporation of the Village of New Denver, in open meeting assembled, enacts as follows:

1. This bylaw may be cited for all purposes as "Village of New Denver Solid Waste Management Bylaw No. 581, 2004."

DEFINITIONS

2. In this bylaw, unless the context otherwise requires,

"**bear proof container**" means, in the case of residential garbage, a cylindrical metal or rectangular wooden container with a secure lid, not exceeding 75 cm in height or 50cm in diameter, which is inaccessible to bears.

"**collection day**" means the day or days during each week on which waste is scheduled to be collected from a specific premises;

"**container or non-bear proof container**" means a receptacle constructed of non-corrosive durable metal or plastic equipped with a tight fitting cover constructed of the same or similar material and handles for lifting, having a capacity not greater than 79.56 litres (17.5 gallons) and fully lined with a plastic bag of the type designed for the disposal of domestic waste 76 x 90 cm (30"x 36") and constructed of material not less than 1.5 mil thickness;

"**Council**" means the Council of the Corporation of Village of New Denver;

"**dangerous wildlife**" means any animal prescribed as such by the BC Wildlife Act. This includes bears, cougars, coyotes, wolves, and any other species prescribed by that Act

"**industrial waste**" means material from excavations; material from lot clearing or building construction, repairs, alterations, or maintenance; debris from any building removed or damaged or destroyed by fire or any other cause; material from any manufacturing processes; dead animals; condemned or contaminated matter from any premises; (and any similar material other than human or animal excrement);

"**landfill**" means an area designated and established for the use of residents of the Village for the disposal of waste;

"**non-residential container**" means a metal bin, having a capacity of 3.06 cubic metres (4 cubic yards), used or intended to be used at a commercial, industrial, institutional, or other non-residential premises, supplied by the Village;

"**stand**" means a wooden or metal enclosure designed to hold all containers required by the premises on which the stand is provided, and which shall be so designed as to keep all containers a

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

minimum of 250 mm (10 inches) and a maximum of 750 mm (29.5 inches) from ground level, in a closed position at all times and protected from interference from animals;

"waste" means discarded or rejected material but does not include human or animal excrement, industrial waste, compostable matter or recyclable material;

"waste collection area" means an area or areas established by Council within which waste will be collected by the Village as frequently as is considered necessary by Council;

"wildlife attractant" means food products and by-products, household garbage, food waste, pet food, bird food, fallen fruit, antifreeze, paint and other edible products or waste that could attract Dangerous Wildlife

"wildlife resistant enclosure" means a fully enclosed structure consisting of walls, roof, and door(s), capable of being securely latched and of sufficient strength and design to prevent access to the contents by wildlife

"village" means the Village of New Denver.

RESPONSIBILITIES OF OWNERS AND OCCUPANTS

3. (1) No person shall dispose of waste or industrial waste except in accordance with this bylaw.
(2) No person shall dump or dispose of any waste or industrial waste, or any noxious, offensive, unwholesome or discarded matter in any place other than the designated landfill unless directed to do so by the Village.
4. The owner or occupant of every premises shall provide sufficient containers to hold the normal waste generated from that premises during the period between collection days.
5. No person shall place or keep any container or receptacle for industrial/residential waste upon any street or public land in the Village except as specifically provided in this bylaw.
6. The owner or occupant of every premises shall provide, and maintain in good and sanitary condition, sufficient containers for all waste upon the premises owned or occupied by him, and shall ensure that the mouth of each container is closed or securely covered except when the container is actually being filled or emptied.
7. Every person shall dispose of waste upon the premises owned or occupied by him/her by placing or causing the same to be placed in a container maintained for that purpose, but not elsewhere.
8. Except as otherwise directed by the Superintendent of Public Works, non-bear proof containers shall not be placed on the streets and lanes prior to 6:00 am on garbage collection days.
9. The owner or occupant of premises from which waste is to be collected shall ensure that all wet or granular material is separately wrapped or put into a plastic bag before being placed in a container for pick-up.
10. All non-residential containers shall be located in an area as directed by the Village. It shall be the responsibility of the occupant to ensure that all waste containers are kept, at all times before collection, in a fashion that keeps same inaccessible to animals and impervious to weather.

GENERAL REGULATIONS

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

11. Food waste generated at a property may be disposed of on the property by composting so long as it does not attract dangerous wildlife
12. No person shall leave wildlife attractants outdoors where dangerous wildlife may be attracted, or where there is a reasonable possibility of dangerous wildlife being attracted, unless the attractants are kept in a wildlife-resistant enclosure. There is an exception for waste that has been placed in a container and put out for pickup during the designated times on collection day(s)
13. Failure to comply with Section 12 herein may result in the Village by its own employees or authorized agents, cleaning up and removing such wildlife attractant. The cost of such cleaning and removal shall be charged to the Owner of the property, and where such charges are unpaid on the thirty-first of December in the same year, the costs shall be added to and form part of the taxes payable in respect of that real property as taxes in arrears
14. Notwithstanding any other provisions of this bylaw, where a recycling program is in effect and storage or other recycling facilities are available, either within the Village or elsewhere, the following shall be either recycled or otherwise disposed of in accordance with this bylaw:
 - (a) aluminum and tin cans
 - (b) corrugated cardboard
 - (c) glass bottles and jars
 - (d) motor oil
 - (e) paper
 - (f) magazines and catalogues
 - (g) plastic milk jugs
 - (h) all other material as may, from time to time, be accepted for recycling
15. The Village shall be responsible for removing on collection day only the contents of one container of residential garbage. Removal and disposal of the contents of all other containers which do not clearly display official Village tags shall be the sole responsibility of the owner or occupier of the premises which produced the waste.
 - (a) Official tags will be sold by the Village of a cost of \$4.00 each and:
 - (i) one tag will be required for a second container of garbage
 - (ii) two tags will be required for each container in excess of two containers per week
 - (iii) may be obtained at the municipal office or from the public works crew during garbage collection runs
 - (iv) be firmly affixed to the top of the waste in the can
 - (v) be whole, unaltered, unobscured and clearly visible to the collector immediately upon removing the lid of the can
 - (b) On a disposable box or carton the official tag shall:
 - (i) be firmly affixed to the top of the closed box
 - (ii) be whole, unaltered, unobscured and clearly visible to the collector.
16. All waste placed in containers constructed of metal or plastic, for collection, must first be placed inside a plastic bag.
17. Garden waste placed at the curb for collection may be placed in secure, covered, disposable corrugated cardboard boxes or cartons which, when filled, weight no more than 10 kg (23 pounds). For the purposes of Section 11, each such box or carton shall be counted as a container.

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

18. When a stand is used for the storage of waste as provided for in this Bylaw, and while the stand is on his/her premises the owner or occupant of the premises shall be responsible for maintaining the stand in a condition which is not offensive or dangerous to the public health.
19. Where Council considers it in the public interest to do so, the Village may temporarily place one or more stands on public or private lands to accommodate waste expected to be generated at a special event or function. Council may, at its discretion, establish a charge for the temporary placement, use, and removal of stands under this subsection.
20. The owner or occupant of any premises shall at all times ensure that waste or industrial waste is kept within the containers or stand provided for that purpose, and not allowed to spill onto, or accumulate on, any street or adjoining public or private property.
21. No water or other liquid shall be kept in, or be permitted to remain or accumulate in, any container or stand and no person shall keep or place any explosive, toxic, hot or highly flammable substance in any container or stand.
22. Where any premises is served by a lane, all waste from such premises shall be placed in containers for collection at a location with two (2) meters of such lane, but not in the lane.
23. Where containers are placed for collection within any structure, fence, or other enclosure, direct access to the containers from a street or lane shall be provided.
24. Where any premises is not served by a lane, all waste from such premises shall be placed in containers for collection at a location as close as possible to the traveled portion of an adjacent street but not on a sidewalk or in such a location as to interfere with vehicular or pedestrian traffic.
25. Except on collection day, all containers shall be kept and maintained on the premises of the owner or occupant, and any can located on any street or other public land in the Village other than on collection day may be removed and disposed of at the discretion of the Village without compensation to the owner thereof.
26. Collectors designated by Council for the collection and removal of waste shall have the right to enter at all reasonable times all premises and yards to the extent necessary for the performance of his/her duties in accordance with this bylaw.
27. No person other than a lawful user thereof, or an authorized collector of the Village, shall open any container or stand, remove anything there from, add anything thereto, or in any way disturb the contents thereof; nor shall any other person handle, interfere with or in any manner disturb any container put out for collection.
28. When any can is in a condition that presents a hazard to the collector or has been condemned by the Village for any other reason, and written notice to that effect has been given to the owner or occupant, the condemned can may be removed and disposed of along with the waste from that premises.
29. No person shall operate a vehicle in the Village while it is carrying waste or industrial waste unless the portion of the vehicle in which the material is being carried is securely covered or the material is secured to prevent any part of such material from falling off or out of the vehicle while it is in transit.
30. The removal of industrial waste from any premises and the full cost thereof shall be the sole responsibility of the owner or occupant of such premises.

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

31. The Village may suspend collection service from properties where stands or their locations for pick-up do not comply with the requirements of this Bylaw, but such suspension shall not relieve the owners or occupants of such premises from their responsibilities under this Bylaw.
32. Collectors shall not enter any building for the purpose of carrying from or returning thereto any container, except when in the judgement of the Village it is impractical to store the container outside the building.
33. Collectors shall not pick, sort over, or remove for their own use any waste or other discarded materials on any premises or on the collection vehicle.

FEES AND PAYMENTS

34. All fees and charges, commencing in the calendar year 2005 shall be as per Schedule "A" attached and forming part of this Bylaw.

OFFENSES AND PENALTIES

35. Every person who violates any provision of this Bylaw, or who suffers or permits any act or thing to be done in contravention of any provision of the bylaw, or who neglects to do or refrains from doing anything required to be done by any provision of this Bylaw, shall be deemed to be guilty of an offence under this Bylaw and shall be liable on summary conviction to a fine of not less than \$50.00 nor more than \$2,000.00.

REPEAL

36. Village of New Denver Garbage Collection Bylaw No. 536, 2000 and all amendments thereto are hereby repealed in their entirety.

EFFECTIVE DATE

37. This Bylaw shall come into full force and effect on January 1, 2005.

READ A FIRST TIME this 14th day of December 2004.

READ A SECOND TIME this 14th day of December 2004.

READ A THIRD TIME this 14th day of December 2004.

RECONSIDERED AND FINALLY ADOPTED this 17th day of December 2004.

MAYOR

ADMINISTRATOR

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

This Bylaw has been consolidated for convenience.

List of Amending Bylaws:

Bylaw	Effective Date
Waste Management Bylaw No. 716, 2018	June 26, 2018
Solid Waste Management Rates Amendment Bylaw No. 621, 2007	January 1, 2008
Solid Waste Management Rates Amendment Bylaw No. 643, 2009	January 1, 2010
Solid Waste Management Rates Amendment Bylaw No. 668, 2011	January 1, 2012
Solid Waste Management Rates Amendment Bylaw No. 682, 2013	January 1, 2014
Solid Waste Management Rates Amendment Bylaw No. 693, 2014	January 1, 2015
Fees and Charges Bylaw No. 699, 2016	April 26, 2016
Fees and Charges Amendment Bylaw No. 704, 2016	January 1, 2017
Fees and Charges Amendment Bylaw No. 712, 2017	January 1, 2018

THE CORPORATION OF THE VILLAGE OF NEW DENVER
CONSOLIDATED BYLAW NO. 581 AND AMENDMENTS THERETO

Village of New Denver Bylaw No. 712, 2017

SCHEDULE "D"

Solid Waste Management Fees

Annual Garbage Rates

	<u>2018</u>	<u>2019</u>
Residential		
50 Tags	\$159	\$164
Additional tags	\$4	\$4
Hospital	\$4,138	\$4,262
School	\$2,546	\$2,623
Seniors Citizens Housing Complex	\$1,591	\$1,639
Municipal Buildings	NO CHARGE	NO CHARGE
Sandwich Shops	\$345	\$355
Hotel, Motel	\$583	\$601
Restaurant, Café	\$530	\$546
Beverage Room	\$212	\$219
Grocery Store, Supermarket	\$796	\$820
Convenience Store	\$265	\$273
Auto Repair Service with Gas Station	\$318	\$328
Auto Repair Service	\$265	\$273
Post Office	\$361	\$372
Car Wash	\$212	\$219
All other businesses (once weekly pick-up)	\$212	\$219

5% penalty will be applied to all amounts that have not been paid by February 15th

5% additional penalty will be applied to all amounts that have not been paid by October 1st



The Corporation of the Village of New Denver

P.O. Box 40, New Denver, BC V0G 1S0 • office@newdenver.ca

PHONE (250) 358-2316 • FAX (250) 358-7251

EL-D

TO: Mayor and Council
FROM: Acting CAO
SUBJECT: Municipal Response to Rats
DATE: October 1, 2019

OPTIONS:

1. Mail information about reducing the rat population to all property owners
2. Update Village website to include information about reducing the rat population
3. Purchase equipment to assist with reducing the rat population

RECOMMENDATION:

That the Village of New Denver mail information about rat control to all property owners; and further, That the Village website be updated to include links to information provided by WildSafeBC; and further,

That up to \$500 be spent to purchase equipment to aid in reducing the rat population.

BACKGROUND: At the September 20, 2019 Committee of the Whole meeting, the options above were recommended to Council as preliminary actions to reduce the rat population in New Denver and support community groups working towards this goal. Since the meeting, a group of concerned citizens have created a Facebook group dedicated to the issue and have taken on mapping the location of rats killed in the community.

ANALYSIS:

WildSafe BC has produced a brochure which provides good information about actions that residents can take to reduce rat habitat and attractants, as well as trapping information. WildSafe BC brochures could be mail dropped (placed in all mailboxes at the New Denver post office, except those banning junk mail) or mailed to all property owners. A mailout of WildSafe brochures will cost approximately \$500 (\$100 for brochures, \$50 for envelopes, \$350 for postage) and require 2-3 days of staff time. If the brochures were included in the 2020 utility billings (to be mailed in January 2020) the cost would be reduced. A mail drop would cost only \$30 (plus brochure cost) but would only reach about one half of residents and no non-resident property owners.

Options for sharing information through the Village's website include adding a page dedicated to rat control or linking to existing information provided by WildSafe BC. Adding a link to WildSafe BC's site can be done immediately. Creating a new page can be done by the end of October, using existing staff resources.

There is a range of equipment that could be purchased to assist with controlling the rat population:

- Snap traps are available from Silverton Building Supplies at a cost of approximately \$5 each.
- CO₂ powered traps cost approximately \$170 (\$200 with a counting feature) or \$760 for 5, and will require additional CO₂ cartridges (\$20 for 5 or \$100 for 30) and additional lure formula

(\$9-11 each) after 6 months. Pricing for this equipment is given in USD and duty charges may apply.

- JoraCan composter units can be purchased for \$1015 each (including shipping), and serve up to 30 people.
- Toter bear-proof garbage bins are available in 32 L and 64 L sizes and can be purchased at cost (\$200-215) from the City of Nelson

LEGISLATIVE FRAMEWORK: Nil

STRATEGIC PRIORITY: Nil

COMMUNICATION STRATEGY: Possible options for communicating with residents/property owners include mailouts and website updates.

FINANCIAL IMPLICATIONS: In 2019, \$2000 was budgeted for Animal Control. So far \$856 has been spent, leaving \$1244 remaining in budget. As there are some funds still required for wages for the remainder of the year, approximately \$1000 is still available to spend on rat control measures. Staff recommends budgeting additional funds for rat control in the 2020 budget.

Rats

Rats, once limited to coastal BC communities are now found inland as far east as the Kootenays and as far north as Kamloops. Rats may be living in more northerly locations but have yet to be reported.

Human-Rat Conflicts

- Rats are not native to BC and tend to thrive only in urban areas or areas where food is abundant and winters are mild.
- Rats can cause significant damage to gardens, buildings, crops, and livestock in their search for food and denning sites. Rats cause damage both from feeding on crops but also from gnawing through structures, including electrical wires.
- Rat populations are spreading throughout the southern interior of BC. Getting ahead of the spread is key to being able to minimize the problems associated with large rat populations.
- Controlling food sources and limiting denning areas are key to keeping rats in check - trapping is, at best, a stop-gap measure.
- Children should be taught not to approach any wildlife; serious bites and scratches may result from an encounter with a rat.

Managing Attractants

Rats are attracted to a wide variety of foods, and although they are good climbers and can get into relatively small spaces they can still be dissuaded from visiting your property.

1. **Keep all garbage securely** stored until the day of collection. Garbage should be stored in a secure container which should be cleaned on a regular basis.
2. **Feed pets indoors**, or if fed outdoors, bring in any feed that is not immediately eaten by your pets. Rats will quickly target any type of pet food left out.
3. **Take birdfeeders down at night and feed only during winter months.** Birdfeeders attract a wide variety of wildlife and rats can climb along wires, ropes or steel posts. Be sure to clean up ALL spilled seed under the bird feeder. As rats are nocturnal, taking the feeder in at night will minimize the potential for rats accessing the feed.
4. **Manage your compost properly and turn regularly.** Ideally you will use a rat-proof composter, but lacking that, turn your compost on a regular basis - right to the bottom to ensure that rats cannot nest underneath the compost. Line the bottom of your compost with wire mesh to exclude rats.
5. **Engage with your neighbours.** If you have rats on your property there is a good chance your neighbour does as well. Rat issues need to be addressed on a block-wide basis.

Rats in BC

Rats are, with good reason, considered a species of great concern for many home owners in BC. Rat populations, once established, can increase exponentially in a very short period of time. Concern around the rat's **historical role in spreading disease** and its voracious appetite for many of our crops, make it an animal we need to defend against.

Rats were introduced to BC in the mid 1800's and were originally centered around port cities. In the past number of years, **rat populations in urban areas** in the southern half of the province have been on the increase.

Because of the rats' negative influence on native wildlife (most notably ground-nesting birds), eradication programs have taken place on islands where rats have established themselves. It is in a home owner's best interest to keep a rat population from establishing itself in the first place; prevention is easier than eradication.

Rats will have a nest or den from which they will leave to go on **nightly foraging expeditions**. Normally, rats will forage within 100m of their den but can travel longer distances if food is scarce.

Rats are very adaptable when it comes to choosing a food supply and learn from their neighbours' specific foraging techniques. Some **rats can even fish** and dive for food like mussels and fingerlings.

Rat Facts

- Rats (members of the genus *Rattus*) were introduced to BC via boat traffic in the mid-1800s.
- There are two types of rats in BC: The Norway rat (*Rattus norvegicus*) and the roof rat (*Rattus rattus*).
- Rats can grow up to 50cm in length with about half of that being a tail that is devoid of hair.
- The Norway rat has a larger body than the roof rat, but conversely the roof rat's tail is longer than the Norway rat's tail (relative to the body size).
- Owls, hawks, foxes, coyotes, and weasels prey upon rats; snakes eat immature rats.
- Rats are killed by vehicles, traps, poisons, or other rats. Some domestic cats and dogs capture rats, usually small ones.
- Rats are usually associated with urban environments but also survive along the coast where winters are not as severe.
- Rats are prodigious breeders and a pair of rats could theoretically produce over 900 offspring within a single year.
- Rats are short lived and usually only survive a little over a year outside of captivity.
- Rats are omnivores (meaning they eat both meat and plant materials), but focus primarily on vegetation, including grains, fruits and vegetables.
-

<https://wildsafebc.com/rats/>

Additional Rat Resources

Vancouver Rat Project

http://www.vancouverratproject.com/vancouver_rat_project/about_the_project

http://www.vancouverratproject.com/vancouver_rat_project/home

Pesticides & Pest Management

<https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management>

Pesticide Certification & Training

<https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management/pesticide-use/pesticide-certification>

Pesticide Regulations & Consultations

<https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management/pesticide-use/regulations-consultations>

Integrated Pest Management

<https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/plant-health/integrated-pest-management>

Old Island Pest Control

Have supplied training and information on rats to Cranbrook Pest Control. Norm at Cranbrook Pest Control advises that this company is their first choice for training.

See Blair Dooley, founder, for information

<http://oldislandpestcontrol.com/>

National Pest Management Association

<https://npmapestworld.org/>

Canadian Pest Management Association

<http://pestworldcanada.net/>

Cranbrook Pest Control – Con Murphy at 250-919-2294 con@cranbrookpestcontrol.com

<https://cranbrookpestcontrol.com/about-main-page/>

Managing Rodent Pests

Because rats and mice are prolific breeders, ignoring a problem can result in a much more damaging infestation. They can chew on materials including insulation, siding and wallboard; gnaw on wiring and start an electrical fire; consume and contaminate stored food and transmit diseases.

Identify the Problem

You may have a rodent problem if you notice any of the following conditions:

- Rodent droppings – check the size to determine if they belong to mice or rats
- Chew marks on wood or food and around pipes
- Dirty rub marks along frequently used routes
- Noises in walls

Rodent Species in B.C.

Norway Rat

- Leaves dark, oval pellet droppings, 15-20 mm long with rounded heads
- Weighs up to 0.5 kg (about 1 lb)
- Has a blunt nose and ears that are relatively small for the size of its head
- Has a tail that is shorter than the length of its body (including its head)
- Prefers moist conditions and generally live at ground level, in crawl spaces and burrows around building perimeters

Black Rat (or Roof Rat)

- Leaves droppings that are 10-15 mm with pointed ends
- Is slimmer than the Norway rat
- Has larger ears
- Has a tail that is longer than its body and head put together
- Nests in ceilings and attics

Mice

- Leaves dark brown pellet droppings, about 6mm long with pointed ends
- Weighs less than 30g
- Has a pointed nose, relatively large ears and a nearly hairless tail
- Nests in hidden, enclosed spaces using shredded paper, insulation, string or other soft materials
- Prefers grains and seeds, but will nibble on almost anything
- Gnaws through wood, asphalt shingles and soft mortar
- Squeezes through cracks little more than 1 cm wide

Keep Them Out

Make sure that buildings are in good repair and that access to food and water are restricted. Take some extra precaution to make sure that conditions are inhospitable to your unwanted guests:

- Block all openings with durable materials or use heavy wire mesh to cover openings that cannot be blocked
- Regularly inspect and repair entry points
- Remove hiding places near buildings like firewood, equipment or dense vegetation
- Prune back branches that hang over eaves and roof areas
- Remove any sources of food and water:
 - Store cereals and dry food in glass or metal containers
 - Keep pet food and birdseed in sturdy, covered bins
 - Store produce in a refrigerator or a secure room that has heavy wire screens on vents open to the outdoors
 - Compost kitchen waste in sturdy, closed bins – don't put meat scraps or bones in the compost bin
 - Store outdoor garbage in tightly-closed containers
 - Make sure bird feeders are away from buildings and seeds don't spill on the ground
 - Repair any leaky plumbing

Control Methods

Ensure that native species are not harmed by control methods. If in doubt, use a live trap to catch the animal so you can identify it.

Use a professional pest control operator to help with a serious rodent problem. They will know the behavioural differences between different rodents which will help effectively manage the pest.

Once the infestation is under control, repair or seal any access points to prevent new infestations from starting.

Traps

When baited and set properly, snap traps are effective at killing rodents quickly and humanely:

Set traps at right angles along walls where rodents travel, with the bait side of the trap toward the wall

Use bait like dried fruit, peanut butter (mixed with oats), cheese, marshmallows, onions or any other food they've already been nibbling on

Rats are cautious about new things so leave the baited traps out for several nights before setting them

Wear gloves to handle the trap and all dead rodents

Wrap the dead animal in plastic and put it in the garbage

Used traps are more attractive to mice than new traps

Live traps are also effective. They do not need to be reset to continue catching rodents. Rodents die of stress and exposure if they're held without food or water so check the trap daily. If choosing a live trap for humane reasons, consider what to do with live rodents that are caught.

Cats

Some cats can catch mice or rats – especially if they have access to where rodents are living like an attic or crawl space. A few things to note about cats catching rodents:

- A cornered adult rat can seriously injure a cat

- Cats may bring live rodents into living spaces

- Rodents often carry parasites that can be passed onto cats

Poison

Poison baits should only be used as a last resort. They risk poisoning children, pets and wild animals either directly or indirectly (e.g. when a pet or wild animal catches a dying rodent after it has eaten the bait). They also can cause a rodent to die and decompose in an inaccessible place which leads to a terrible smell and insect infestations.

Poison must be placed in areas inaccessible to children, pets or other animals - in tamper-proof bait stations. Never scatter poison baits over the ground or inside a building (this is dangerous and illegal). When using any bait, always read the label and follow the directions.

Cellulose (from powdered corn cobs)

Available as a pelleted bait. Cellulose from powdered corn cobs appears to interfere with the digestive system by causing blockages in the intestine, resulting in dehydration and death. Bait can be used indoors for rats and mice. Use in commercially available bait stations and protect from children and non-target animals. These products pose a negligible risk to avian and mammalian predators and scavengers that may feed on dead or dying rodents

Anticoagulants

These baits cause death by internal bleeding. They present a moderate to high risk of secondary poisoning to other animals that might eat the poisoned rat.

Once the pests have been eliminated, dispose of bait stations at a hazardous waste collection depot, otherwise double-wrap them in plastic and put them in the garbage.

Ultrasound Repellers

Repellers are expensive and seem to be effective only over small areas for a limited time. They may initially work but eventually rodents get used to the sound and learn there's no harm associated with it.

Dead animal carcasses must be disposed of properly because they can carry disease and attract wildlife. Some animals can be thrown in the garbage or buried. Contact your local municipality to find out the proper method for your area.

If you have a pest problem, contact a local pest management company for assistance. They can help you identify, prevent and treat pests common to your area.

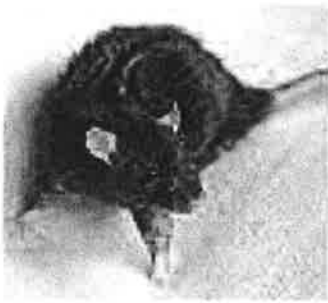


Norway Rat

rounded ends

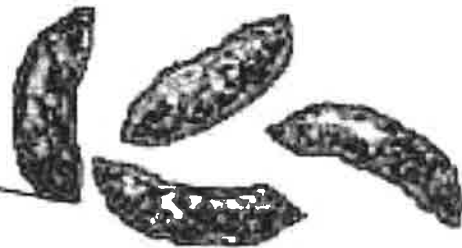


Average Length: $\frac{3}{4}$ inches



Roof Rat

pointed ends



Average Length $\frac{1}{2}$ inches



House Mouse

pointed ends



Average Length $\frac{1}{4}$ inches

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-

<https://wildsafebc.com/rats/>

HISTORY OF RAT CONTROL IN ALBERTA

Norway rats are one of the most destructive creatures known to man. They destroy and contaminate untold quantities of food, and through their tunneling activities, they undermine the foundations of buildings, sewer and water lines as well as city streets. Rats also weaken and deface buildings by gnawing holes through floors, walls, insulation and supporting structures.

Norway rats carried the flea that spread plague throughout Europe and Asia. Even today, rats spread organisms responsible for food poisoning, hepatitis, tularemia and other diseases.

Therefore, the people of Alberta are extremely fortunate not to have rats in the province. This situation is not by chance, but by design. Since 1950, Alberta has had a program to keep rats out of the province.

This publication describes several key elements about the rat control program in Alberta:

- evolution
- history
- current status

Background

Norway rats are unique because they must live with humans or in their structures. The rats cannot survive in natural areas and cannot overwinter in cultivated fields in Canada.

Norway rats are not native to North America but were introduced to the east coast around 1775 and gradually spread westward over most of the continent. They moved west as North America became settled, as farms appeared closer together and as cultivated land began to dominate the landscape.

Rats entered eastern Saskatchewan in the 1920s and extended their range to the northwest at about 24 km (15 mi) per year (Figure 1). Rats were first reported on the eastern border of Alberta in 1950, and would have continued to spread westward had it not been for a rat control program that halted their advance and continues to maintain an essentially rat-free province to date.

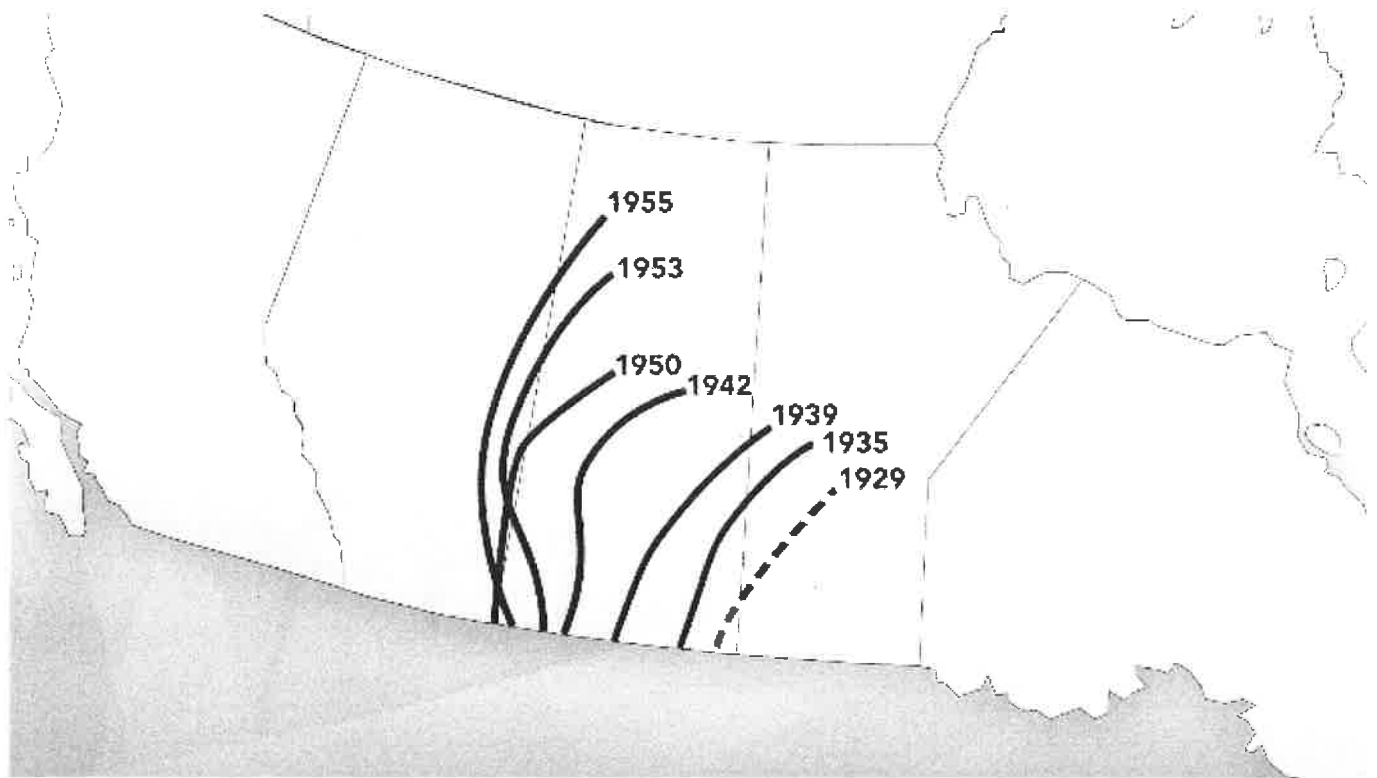


Figure 1. The westward movement of the Norway rat across the prairies.

The Early Years, 1950-53

Norway rats were first discovered on a farm near Alsask on the eastern border of Alberta during the summer of 1950. The discovery was made by field crews from Alberta Department of Health who were engaged in studies of sylvatic plague, a disease of Richardson's ground squirrel.

Although aware of the economic destruction caused by rats, provincial authorities were initially concerned that rats might spread plague throughout Alberta. Consequently, the Alberta government decided to halt, or at least slow, the spread of rats to the west. In 1950, responsibility for rat control was transferred from the Alberta Department of Health to the Department of Agriculture.

Alberta Agriculture was probably the better choice to administer a rat control program because the affected area was predominantly rural. The department specialized in extension and was better staffed and organized in rural areas. Existing legislation also authorized the control of agricultural pests.

The *Agricultural Pests Act of Alberta*, 1942, authorized the Minister of Agriculture to designate as a pest any animal that was likely to destroy crops or livestock. The act further stipulated that every person and every municipality had to destroy and prevent the establishment of designated pests. Where pest control was not considered adequate, the provincial government could carry out the necessary measures and charge the costs to the landowner or municipality.

Therefore, legislation that mandated control of pests by every person and every level of government was in place before rats ever entered Alberta and became effective when rats were declared a pest in 1950. An amendment to

the act in 1950 further required that every municipality appoint a pest control inspector.

William Lobay, crop protection supervisor, originally conceived the idea of a control zone to prevent rats from spreading into Alberta, and he was initially responsible for organizing, supervising and administering the program from 1950 to 1953.

Most people in Alberta had never been in contact with rats and did not know what rats looked like or how to control them. Consequently, the government's initial response was to educate the public and obtain support from local governments and residents.

Preserved rat specimens were distributed to Alberta Agriculture offices to aid in the identification of rats in the 1950s. In 1951, five provincial employees whose primary responsibility was weed inspection provided training and assistance to municipal pest control inspectors.

Personnel from the Saskatchewan Department of Health, familiar with rats and rat control, also assisted with training. Conferences on rat control were held in 6 towns in eastern Alberta, and 2,000 posters and 1,500 mimeographed pamphlets called *Rat Control in Alberta, 1951* were distributed to grain elevators, railway stations, schools, post offices and private citizens.

Rat Control in Alberta, 1951 advocated the destruction of rats, the elimination of rat harborages and food supplies and the rat-proofing of buildings, principles which are still valid and basic for rat control today. Recommended toxicants were red squill, antu, barium carbonate, zinc phosphide, 1080, thallium sulfate, arsenic, strychnine alkaloid and warfarin. Warfarin, the first anticoagulant rodent poison, was still a new and relatively untried toxicant in 1951.

By the fall of 1951, 30 rat infestations had been confirmed along 180 km of Alberta's eastern border, and in 1952, rats were active along 270 km of border. Most infestations were within 10 to 20 km of the border although rats had penetrated 50 to 60 km westward in three areas between Medicine Hat and Provost.

Alberta did not have the expertise to control rats and probably could not have developed the expertise in time to halt the movement of rats to the west. Consequently, a private pest control firm was contracted to control rats until Alberta Agriculture could develop an effective program.

During June 1952 to July 1953, some 63,600 kg of 73 per cent arsenic trioxide tracking powder was used to treat 8,000 buildings on 2,700 farms (24 kg/farm; 8 kg/building) in an area 20 to 50 km wide and 300 km long between Medicine Hat and Provost.

Tracking powder was blown underneath all permanent buildings within the control zone. While only permanent buildings were supposed to have been treated, some temporary structures were treated as well.

Tracking powder was exposed in some areas where the treatment was haphazard or where temporary buildings were moved or torn down. In addition, some residents were not informed that arsenic was being used, and some, allegedly, were told that the tracking powder was only harmful to rodents. Consequently, some non-target poisoning of livestock, poultry and pets occurred for at least the first two to four years after treatment. As a precaution, Alberta Agriculture sent letters to all residents in the control zone each year until 1955, warning of the dangers to humans, livestock and pets.

The poison-proofing program was expensive, costing \$152,670 for 1952-53, of which 74 per cent was for tracking powder. The annual cost of rat control

did not exceed this figure until 1978. Consequently, the poison-proofing program was discontinued because the cost was considered too high and the arsenic poison too dangerous. However, the program apparently was effective; most infestations were confined to areas within 10 to 20 km of the border, and Alberta Agriculture was given the time to develop a rat control program.

The Government Program, 1953-59

During 1953 to 1959, the rat control program evolved into its current structure. Pest control inspectors were appointed by municipalities, and control was administered and supervised by local governments with co-ordination and support by the provincial government.

The southward spread of rats was halted in 1953 when they reached the relatively uninhabited Cypress Hills. Rats continued to spread north until 1958 when they were stopped by the uninhabited and unbroken boreal forest near Cold Lake.

Then, as today, the seven rural municipalities bordering Saskatchewan carried the major responsibility for rat control. Funding, however, was in dispute; these municipalities argued that they were spending funds to protect the entire province from rats. Thus in 1954, Alberta Agriculture agreed to pay 50 per cent of the salary and expenses of a full-time pest control inspector for each rural municipality along the eastern border.

These pest control inspectors performed key tasks:

- checked every premise within the first three ranges (29 km) west of the border (Figure 2)
- distributed bait and established bait stations

- encouraged rat-proofing of buildings and the removal of rat harborage and food
- destroyed any rat infestations that were found

Figure 2. Rat control zone in eastern Alberta.

Rat bait was supplied free of charge to all municipalities that had appointed a pest control inspector. Warfarin, the first anticoagulant rodent poison, was available in 1953.

Warfarin was developed in Wisconsin, where finely-ground corn was the recommended bait substrate. However, corn was not normally available to rats in Alberta, and bait acceptance was poor.

A series of field trials during 1953 to 1955 showed that coarsely-rolled oats gave satisfactory results, and this bait substrate is still used in Alberta today. The amount of bait used in the control program increased annually until about 1958 and then levelled off with the yearly requirements varying between 5,000 and 13,000 kg of dry warfarin bait and between 660 and 4,750 litres of water-soluble warfarin.



Public education and information continued. Posters and brochures on rat control were widely distributed; displays were presented at local fairs, picnics and rodeos; and talks were presented to schools, 4-H clubs, agricultural societies, Chambers of Commerce and to just about anyone who would listen. "Call of the Land," an Alberta Agriculture agricultural news program began broadcasting in 1953 and was used to disseminate information on rat control.

Although there was some initial resistance, public interest and support for rat control was favorable, particularly from people who had rats. As an example, 7 meetings were attended by almost 900 people in the Medicine Hat area during February 1956.

Working with First Nations and Métis communities in north-central Alberta also presented some specific challenges at the time. The rats were unwanted, but some residents were concerned about potential dangers to children, pets and livestock from poison baits. Because of the association of baits with the dangers of strychnine, warfarin baits were removed or destroyed.

At a series of meetings with members of Indigenous communities, an Alberta Agriculture staff member ate warfarin-treated rolled oats while discussing rat control and the physiological effects of warfarin. He was able to effectively demonstrate the relative safety of warfarin to concerned community members, and they were able to move forward together.

The *Agricultural Pests Act* made rat control mandatory. Property holders who failed to control rats and disregarded repeated encouragement and warnings from pest control inspectors could be served with an official warning. Failure to comply with the terms of the warning could result in a court action.

However, legal recourse was not used for several years until the public was educated in rat control. The first court case did not occur until 1955. In 1956,

some 17 notices to control were issued and 3 court actions and convictions resulted. At that time, court cases were heard by a local magistrate who was usually a locally prominent citizen, often a merchant or postmaster. Therefore, rat control was enforced as well as supervised at the local level.

The court actions apparently had the desired effect, for no more than seven notices to control rats have been issued in any year since 1956.

The City of Lloydminster presented a special problem in rat control because the municipality straddles the Alberta-Saskatchewan border. Obviously, rat control in Lloydminster, Alberta, would have been difficult if there were no control in the Saskatchewan portion of the city. This dilemma was resolved by orders in council by the governments of Alberta and Saskatchewan that declared that the *Agricultural Pests Act* of Alberta applied to Lloydminster, Saskatchewan. The number of known rat infestations in the border area increased rapidly from one in 1950 to 573 in 1955, and the numbers varied between 394 and 637 during 1956 to 1959. After 1959, the numbers of infestations dropped dramatically (Figure 3). Hence, almost 10 years passed before an accumulation of training, experience and public education brought the rat problem firmly in hand.

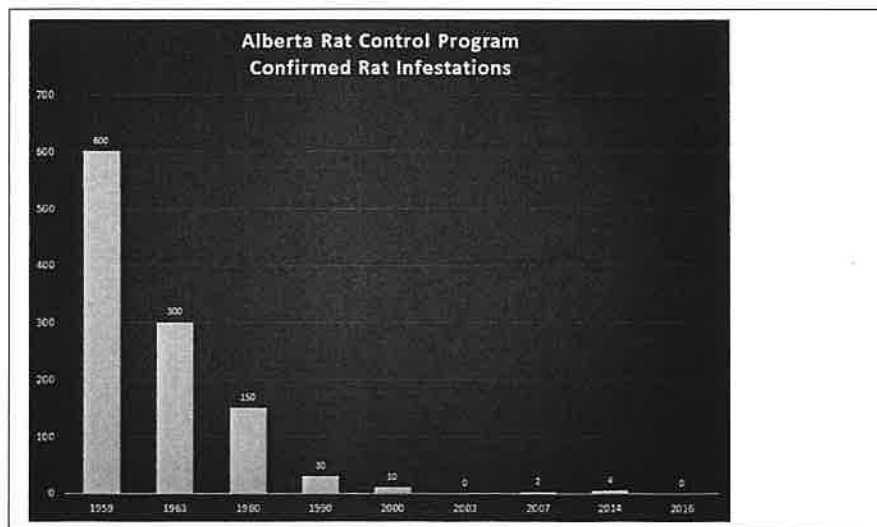


Figure 6. Number of known infestation in the rat control zone.

1960 - Present

Rat control in Alberta has not changed markedly since 1960. The bulk of control is conducted by pest control inspectors hired and supervised by rural municipalities along the Alberta-Saskatchewan border.

The provincial government's share of funding was increased to 60 per cent in 1971, to 75 per cent in 1973, and to 100 per cent in 1975. All premises within the 29 x 600 km control zone from Montana to Cold Lake are inspected at least annually (Figure 2).

The number of premises inspected annually varies between 2,000 and 4,000. Rat infestations are eliminated by bait, gas or traps. Buildings are occasionally moved or torn down, and in some cases, rats are dug out with a backhoe or bulldozer.

Farmers within the control zone are encouraged to eliminate rat food sources and harborages as well as to maintain permanent bait stations. Rats within bale stacks of hay and straw are a continual problem, so farmers are encouraged to place bait within the lower one or two layers of bales when the stacks are built. Pits are dug for municipal garbage disposal sites so that garbage can be buried or burned, and sites are fenced to channel garbage into the pits.

Saskatchewan initiated a rat control program in 1963, which may have reduced the number of rats moving into Alberta. Over the years, meetings have been held with personnel from Saskatchewan to share information and discuss common problems. Some municipal employees from Alberta also work on rat control in Saskatchewan to reduce rat migration into Alberta.

Newer anticoagulants have been used, but warfarin is the standard poison. Warfarin on coarsely-rolled oats with 5 per cent icing sugar is distributed in 454-gram plastic bags. Colored confetti was added to the rolled oats as a safety precaution in 1965. Warfarin water baits are also effective, particularly in the semi-arid prairie and on premises (e.g. grain elevators) where food is plentiful.

After 1959, the number of infestations dropped dramatically; numbers vary between 36 and 216 per year (Figure 3). Surprisingly, overland transportation of rats has not been a major problem, with no more than eight infestations reported in any one year. Most infestations within the interior of Alberta consist of a single rat transported by truck or rail.

A few white rats have been brought in by pet stores, biology teachers and well meaning individuals who did not know it was unlawful to have rats in Alberta. The white rat or laboratory rat is a domesticated Norway rat. If white rats escaped captivity or were turned loose, they could multiply and spread throughout Alberta just like the wild Norway rat.

Consequently, white rats can only be kept by zoos, universities and colleges as well as recognized research institutions in Alberta. Private citizens may not keep white rats, hooded rats or any of the strains of domesticated Norway rats.

Perhaps the greatest "problem" is that most residents of Alberta still cannot identify rats and rat signs. In the fall of 2014, a new telephone number, 310-RATS, was initiated to provide an easy to remember number to encourage citizens to report rat sightings.

Hundreds of suspected infestations are reported each year by concerned

citizens, but most sightings turn out to be muskrats, pocket gophers, ground squirrels, bushy-tailed wood rats or mice. However, all suspected infestations are investigated either by local or provincial field staff. As previously mentioned, confirmed infestations are eradicated as soon as possible.

The public information and education effort might best be described as a maintenance program. Within the control zone, residents know how to identify and control rats. Periodic inspections serve as a reminder that the rat control program is active and necessary. Within the interior of Alberta, most residents know that Alberta is rat-free and there is a program to keep it that way.

Most public education is directed toward identification of rats and rat signs. The discovery of a rat in Edmonton or Calgary receives full media coverage. In addition, the success of the program is reported by provincial or national media three or four times a year, and this success serves as a reminder to the residents that rat control is still an important program in Alberta.

After many years, rat control has become routine and is a source of pride to the citizens of Alberta. However, the problem is not solved; personnel involved in rat control must continually guard against complacency. Rats have the capability to spread throughout Alberta just as easily today as they could in the past.

Personnel

The rat control program in Alberta has been successful because of the concern and effort of thousands of citizens and hundreds of pest control inspectors. However, most human accomplishments result from the right person being in the right place at the right time. The Alberta rat control program was no exception.

Three men contributed immeasurably to the success of the program:

- William Lobay, supervisor of crop protection, had the imagination to conceive the program in 1950 and directed the program from 1950-53.
- Arthur M. Wilson continued to support the program as field crops commissioner and later as director, plant industry division.
- Joseph B. Gurba, the first full-time permanent employee on the rat control program, developed, co-ordinated and supervised the program from 1953 to 1982.

John Bourne managed the Rat Control Program from 1971 until 2006 making many improvements. Phil Merrill took over the managing the program in 2010 and continues to promote and improve the program with his passion and knowledge for pest control.

Today, both Phil and Perry Abramenko are the Government of Alberta's Rat and Pest Specialists overseeing the Rat Control Program.

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