



Current Analysis

Many City of Edmonton sports fields have experienced significant re-establishment of dandelions and other broadleaf weeds since the City stopped the routine use of conventional herbicides in June 2015. Seeds deposited each year have taken root, and healthy growing conditions this year mean that the number of weeds is exceeding the standard levels in City policy.

Council has established policy direction: manage herbicide use (by motion), and maintain fields within a certain standard ([Policy C-501](#)). The City is now taking action to ensure field conditions meet the standards outlined in policy.

Action

The City will assess all 1,465 sports fields, and apply two applications of a herbicide, iron chelate, where needed. This product is one of the lowest-risk options available, and will be applied in a way to both maximize effectiveness and minimize exposure. In addition, the City will do targeted aeration, top-dressing, overseeding and fertilization where needed. The additional work will ensure that weed regrowth is minimized.

Iron is a metallic chemical element that acts as a selective herbicide when chelated. Iron acts to reduce the oxygen intake in a number of broadleaf plant species, which causes the plant to die rapidly. It does not affect grass, although might turn some of the grass a darker green colour. When the weed is treated, iron oxide in the plant causes it to turn black or a dark red-black colour. While this may be unsightly, it is not unsafe.

Iron chelate does not leave a hazardous chemical residue on the fields, dries quickly, has no unpleasant odour and, as indicated by Health Canada, is of low toxicity and poses minimal environmental risks. People and pets should avoid exposure during application and until the fields are dry (between 30 minutes and 3 hours, depending on the weather). After the product has dried, regular use of the fields can safely continue. The City will ensure that signage is in place before, during, and after application.

Background (Operations)

The City maintains 4,100 hectares of turf, which is the area of approximately 7,000 CFL football fields. About 11 per cent of that total, nearly 450 hectares, is home to over 1400 sports fields.

This year, the City will spend just over \$7.5 million on mowing and trimming grass. While we will redeploy existing staff and equipment to ensure this work proceeds, the additional cost of this



application is about \$750,000 for the two treatments, which will be absorbed within existing budgets. The average cost of the product per treatment per field is about \$250. If we were to apply the treatment to roadsides and parks, the project could cost as much as \$10 million.

Background (Policies)

In June 2015, Council passed a motion on the planned elimination of the use of herbicides on City of Edmonton public lands.

That the City of Edmonton stop using herbicides on its own lands, except where they are used to eradicate noxious weeds as defined by the provincial noxious weed list, and the following areas and issues:

1. to prevent sanitary sewer pipe obstruction
2. to control of algal blooms on storm water facilities
3. in the maintenance of high profile and high quality park and facilities:
 - A. Golf courses
 - B. Bowling greens
 - C. Sports fields such as staffed athletic facilities, Premier Sports Fields and Sports Fields in District Parks
 - D. Cemetery burial plots
 - E. Areas/parks involving high profile and international events (including but not limited to, City Hall, Churchill Square, Louise McKinney Park and Hawrelak Park)
4. in commercial agriculture and horticulture crop production (ie. Muttart Conservatory, Old Man Creek Nursery)
5. to control weeds for fire safety management and drainage along LRT rail lines and to control plants and trees from structurally deteriorating hard surfaces (e.g. concrete, asphalt gravel, etc.) and
- 6. to allow low risk herbicides (e.g. acetic acid, citric acid, herbicidal soap, corn gluten, iron chelate, and various bioherbicides referred to as reduced risk herbicides by Health Canada.**

In February 2004, [City Policy C-501 \(Integrated Pest Management\)](#) was adopted. It outlines weed control standards.



**City Acts to Control Weeds on Sports Fields
Background Information
June 16, 2017**

Type of City-owned land	Number of mowing cuts per season	Weed level at which treatment action is taken	Target
Premium parkland	18	> 3 weeds/ sq metre	High quality turf
School grounds/ neighborhood parks (incl. soccer fields)	12	> 6 weeds/ sq metre	Good quality turf
Roadways, walkways, utility right of ways	7-10	> 10 weeds/ sq metre	Good quality ground cover
Undeveloped	--	--	Good quality ground cover

Links

- [Council Motion on Herbicide](#). Motion 6.8 at City Council, [June 23, 2015](#).
- [City Policy C-501: Integrated Pest Management](#)
- [Iron-based herbicides](#) (University of Maryland)
- [Health Canada Registration Decision about iron-based FeHEDTA](#).
- [Product information](#)