



LOW INTENSITY TURF MAINTENANCE

Report Back

Naturalized Meadows 2021

Park Board Committee Meeting
Monday, November 29, 2021





Provide staff updates on the low-intensity turf maintenance motion:

- To share the background and findings from the 2021 meadow pilot
- To make a recommendation for continuing and expanding turf meadows

Background



THEREFORE BE IT RESOLVED:

- A. THAT the Vancouver Park Board direct staff to establish incremental targets and develop an implementation plan, including any new equipment required, to defer and/or alter mowing regimes on appropriate turf surfaces maintained by Park Board staff, with consideration to park typologies and usage intensity;
- B. THAT the current temporary changes in mowing practices (COVID-19-related pilot) be tracked and documented as to quantify and qualify their effect on biodiversity, ecological benefits, operational efficiency/ diversification, emission comparability, and financial sustainability; and
- C. FURTHER that staff to report back to the Board with their findings.

Policy Alignment





N.3.1 Continue to enhance, nurture and connect existing natural areas

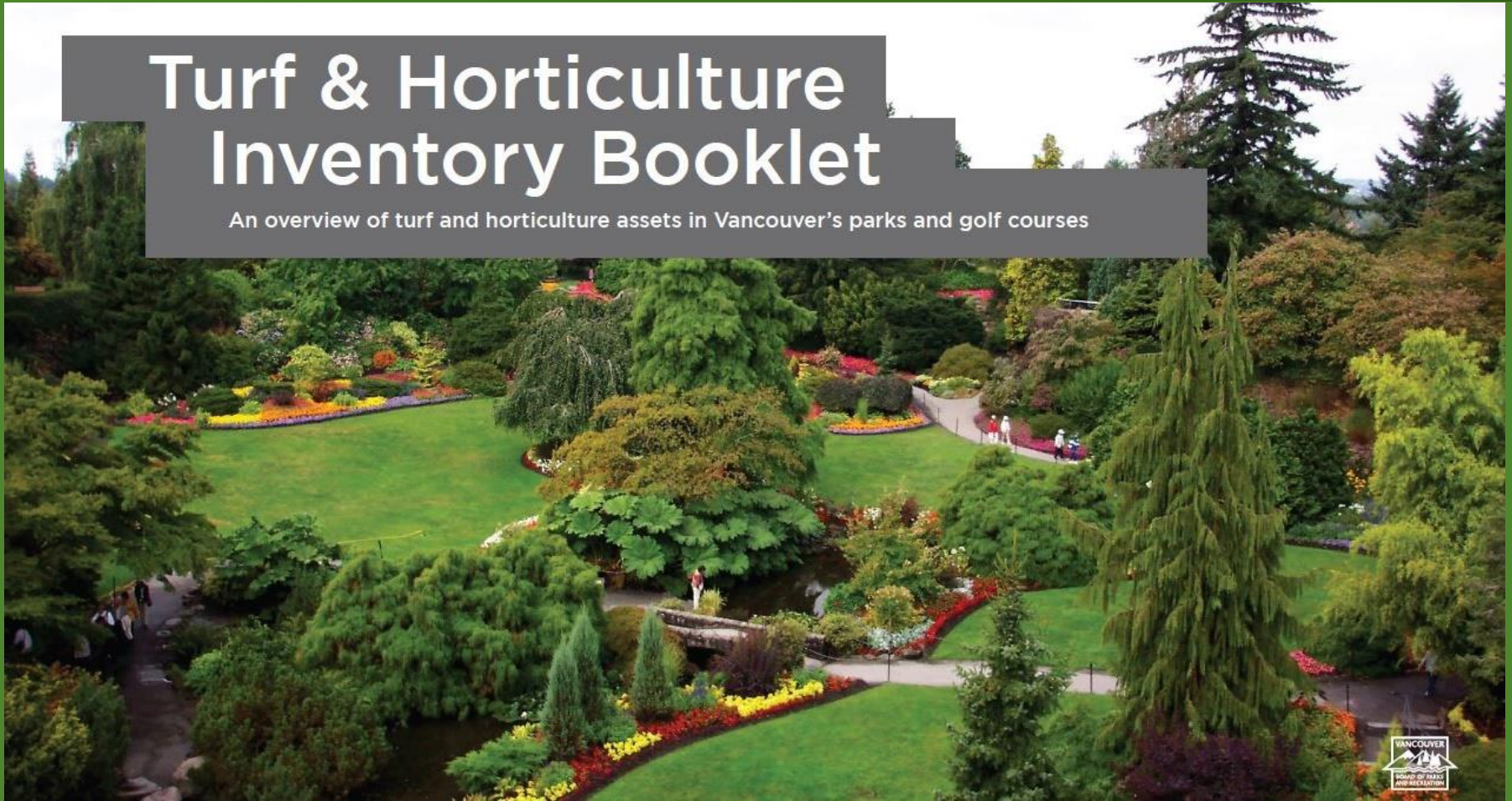
N.3.3 Enhance habitat value for pollinators, insects, and birds

N.3.5 Identify locations for habitat corridors

N.3.6 Provide access to a naturally managed area of at least 0.2 ha within a 10 minute walk of all residents.

Turf & Horticulture Inventory Booklet

An overview of turf and horticulture assets in Vancouver's parks and golf courses



Pilot Site Selection – Turf Type

New Brighton Park		
TURF OVERVIEW		
FIELD TYPE		m ²
1	Grade A (Soil)	0
2	Grade A (Sand)	0
3	Grade B	8,338
4	Grade C	60,505
5	Meadow	0
6	Synthetic Turf	0
7	Gravel Field	0
8	Cinder	0
DIAMOND TYPE		
9	Baseball Diamond	0
10	Baseball Diamond (pads)	0
11	Softball Diamond	0
BUILDING TYPE		
★	Field House	-
TOTAL		68,843
<small>Disclaimer: Numbers are rounded and approximate only. The information contained in this map is supplied on an AS IS basis. Park Board makes no warranty as to the accuracy or completeness of the map's information.</small>		
<small>12,000 0 10 20 40 60 80 Meters</small>		






Pilot Site Selection – Turf Service Level

New Brighton Park



Legend

-  Sports fields
-  High-use passive
-  Low-use passive turf
-  Mowing hazard

Pilot Site Selection – Site Suitability

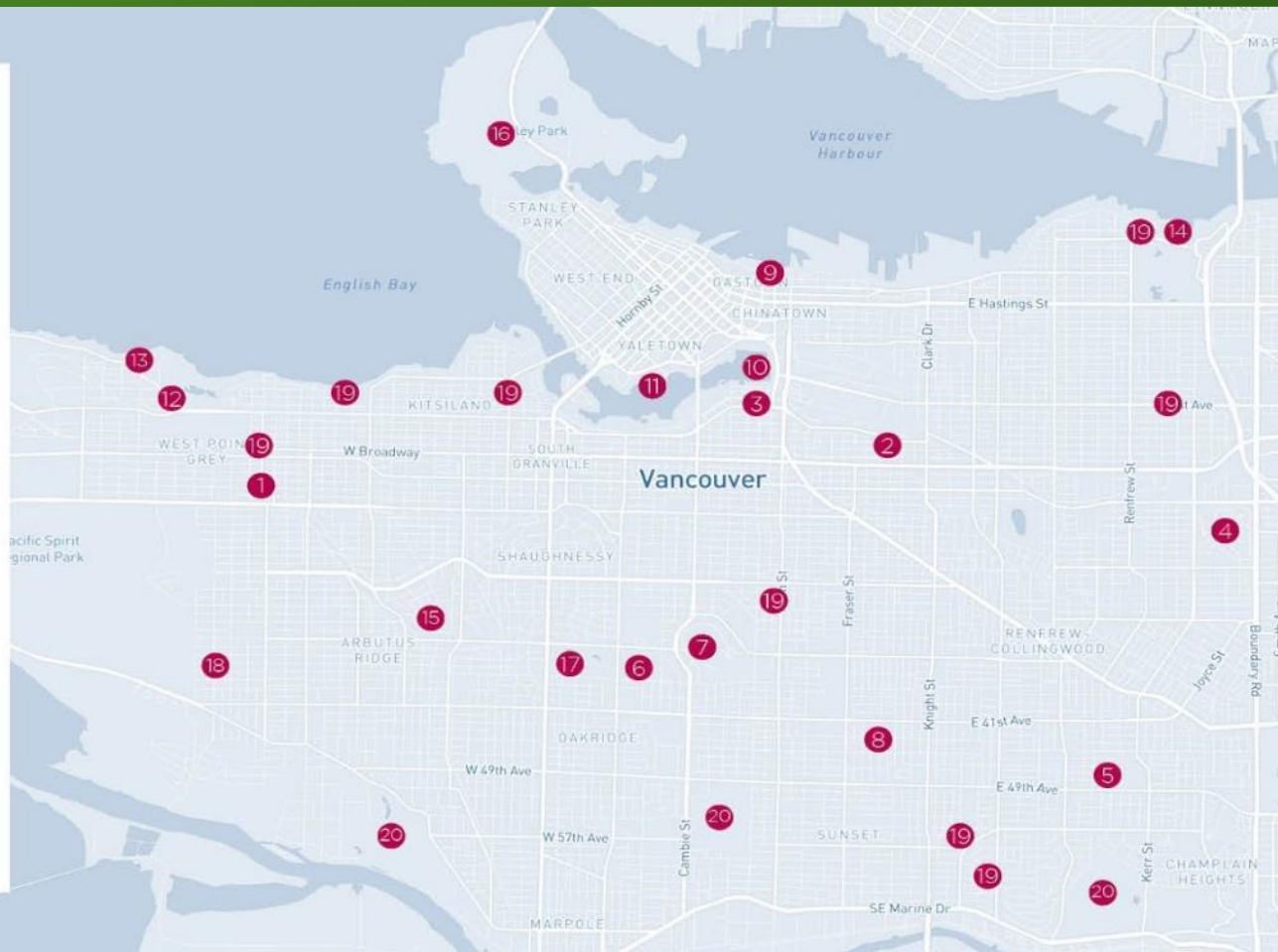
New Brighton Park

2021 Pilot Sites

2021 Pilot Sites

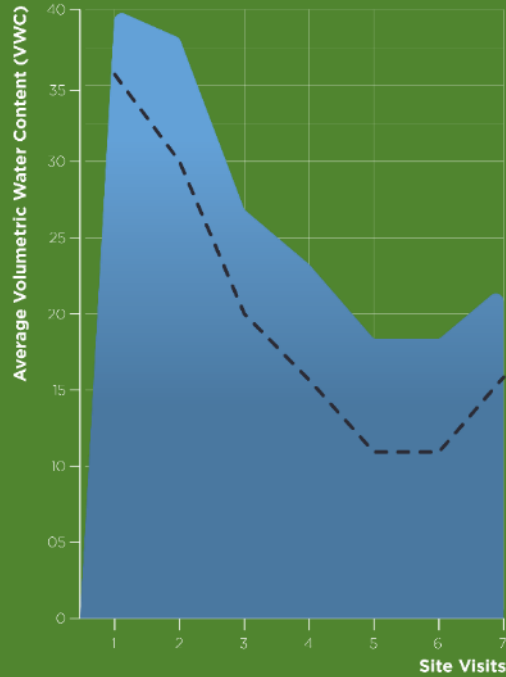
PILOT MEADOW LOCATIONS

1. Almond Park	0.39
2. China Creek North Park	0.34
3. East Park	0.30
4. Falaise Park	0.99
5. Killarney Park	2.97
6. Oak Meadows	1.30
7. Queen Elizabeth	6.73
8. Memorial South Park	1.60
9. CRAB Park at Portside	0.03
10. Creekside Park	0.10
11. David Lam Park	0.06
12. Jericho Park	0.68
13. Locarno Park	0.37
14. New Brighton Park	0.74
15. Prince of Wales	1.02
16. Stanley Park	5.26
17. VanDusen	0.99
18. West Memorial Park	2.56
19. Road Boulevards	1.29
20. Golf Courses	9.6
TOTAL	37.3Ha

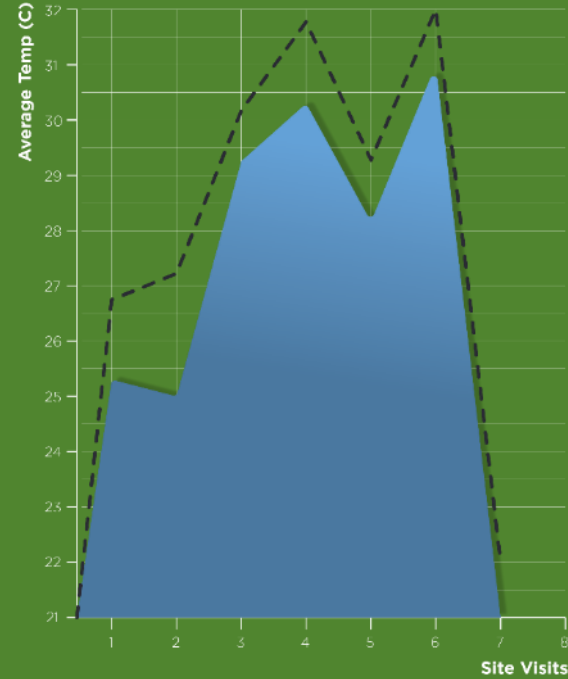


Meadow Pilot Findings





Average Soil Moisture



Average Soil Temperature

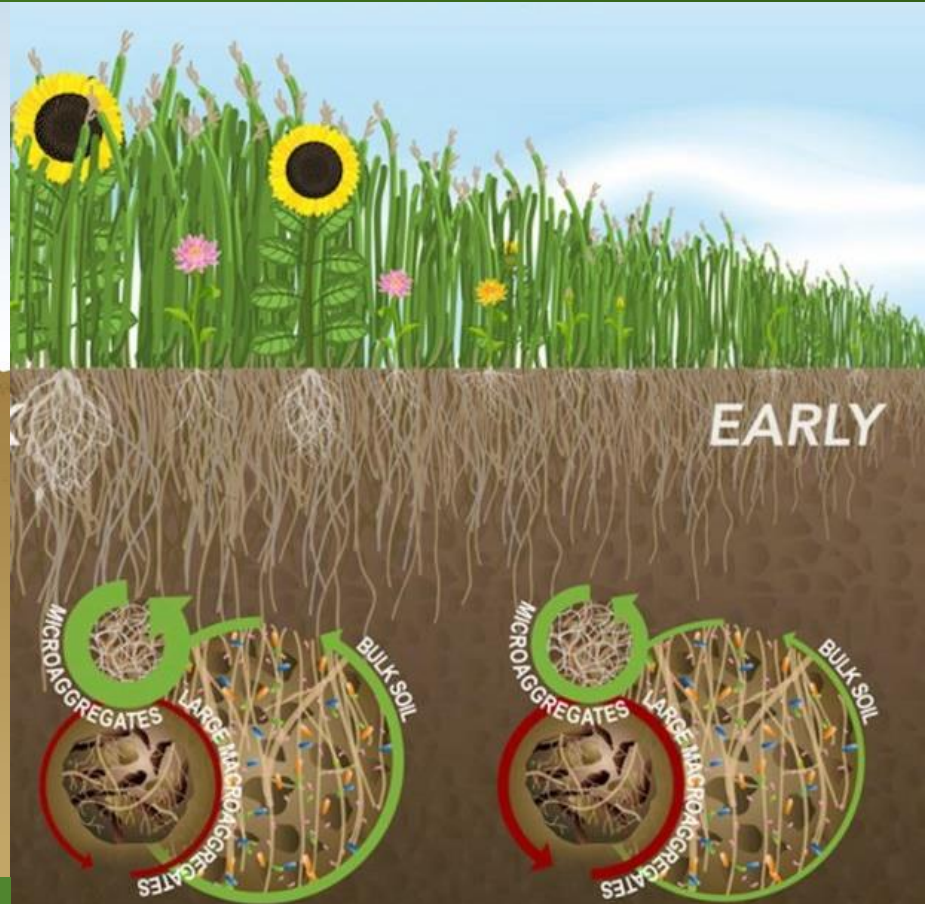
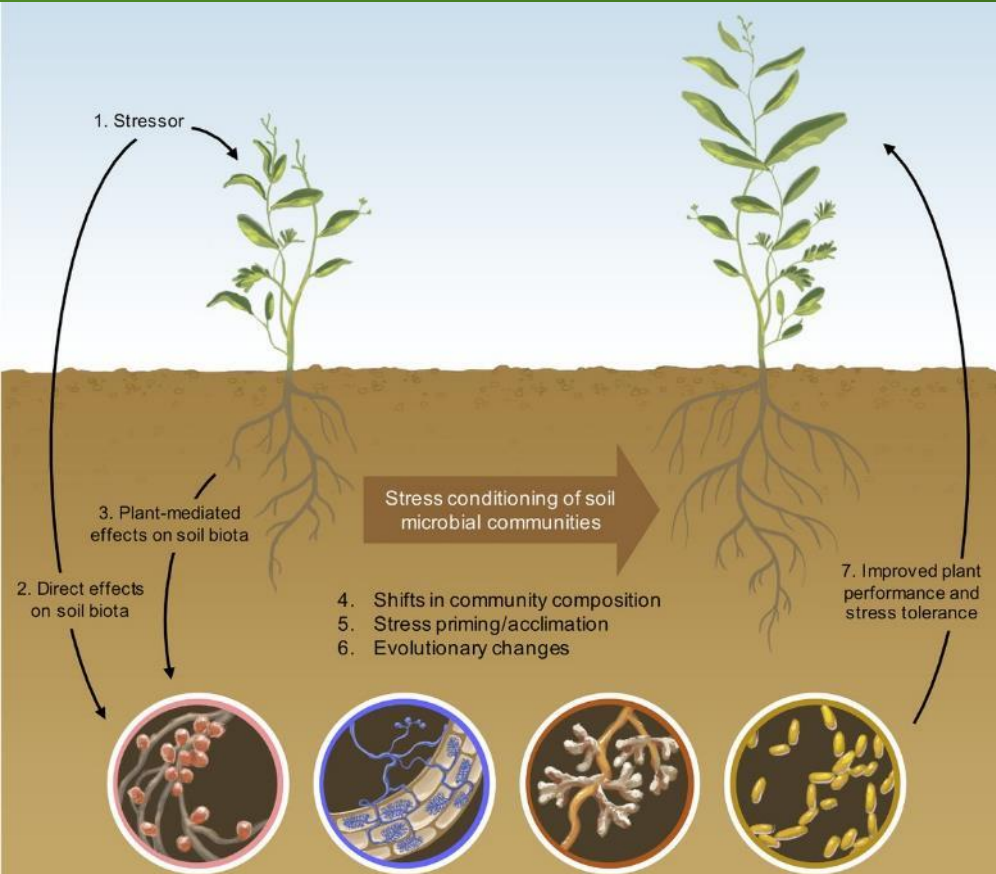
Data for 7 meadow sites (colored areas) and 7 adjacent turf control sites (black dash)



- Pollinating flowers and native grasses require 50% less water compared to turf grass
- Resilient and reliable carbon storage
- Reduction in carbon emissions during maintenance with proper equipment

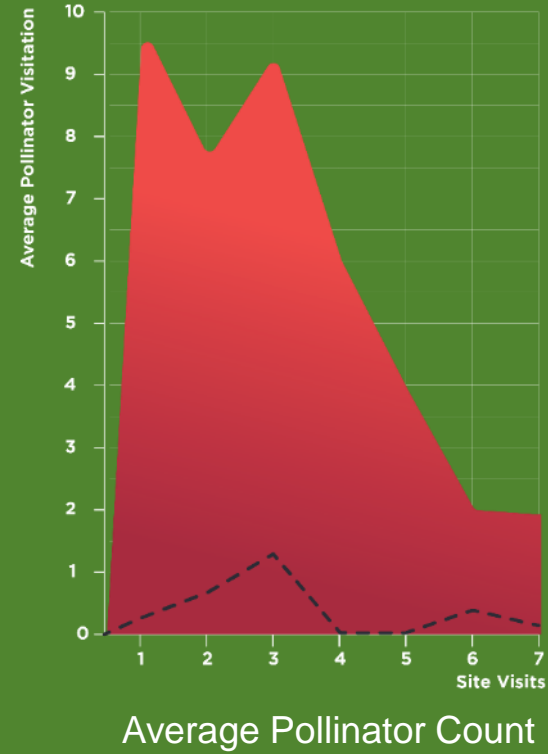
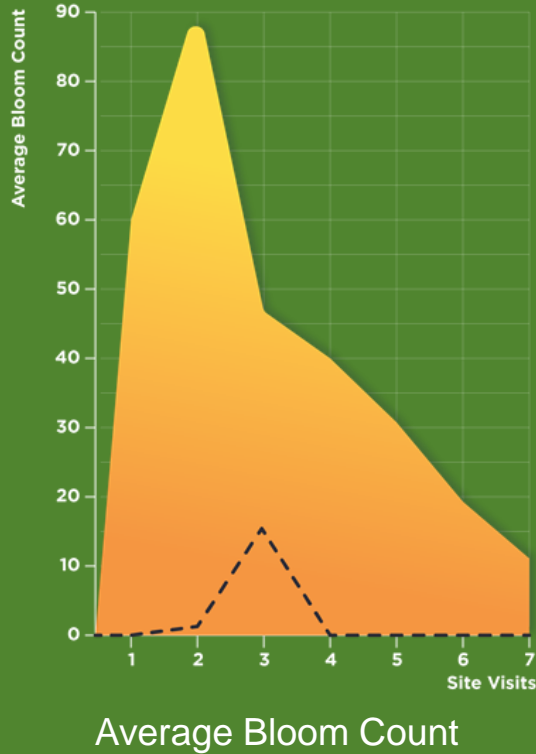


Soil Microbes



Plant-soil interactions

Pollination



Data for 7 meadow sites (colored areas) and 7 adjacent turf control sites (black dash)

Pollinating Flowers









Mason Bee Nesting Boxes



Nature Kids BC and Jericho Stewardship Group (left), Oak Meadows Insect Hotel (right)

Research Partnerships



	# Bats Recorded						
Location	MYLU	EPFU	LACI	MYY	MYC	LANO	MYV
John Hendry	X	X	X		X	X	
Vanier			X				
Jericho	X			X			
South Memorial							
McCleery	X	X	X	X	X		
Fraserview	X	X		X	X		X
Queen Elizabeth	X	X	X			X	

Park meadows and naturally managed areas support bat habitat

Bats in Vancouver Parks



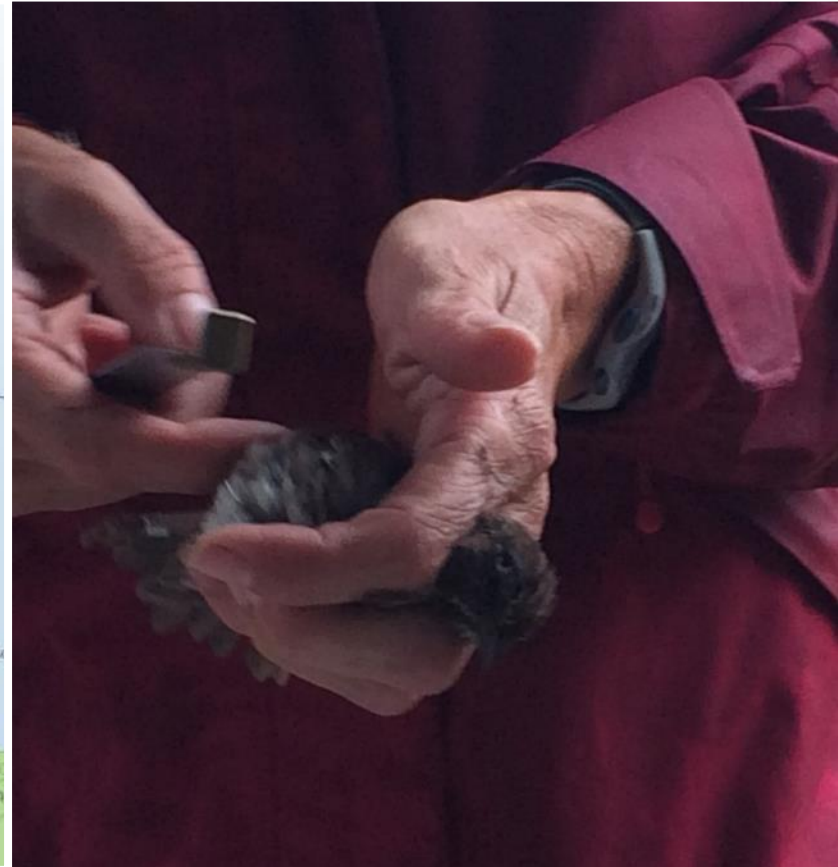
Bat Box Program



Bat boxes installed at Parks and Golf Courses

Motus Wildlife Tracking Stations

The Motus Wildlife Tracking System: a collaborative research network to track wildlife movement



NATURALIZED AREA



Pollinator Meadow - come in and enjoy!

The long grasses and flowers here provide an important food source and habitat for pollinators, including butterflies. As a home to many beneficial insects, the area also feeds birds and their young.

Meadow maintenance reduces carbon emissions, a key cause of global warming and climate change. Longer grass also helps the soil hold water and stay cooler through the summer, protecting surrounding trees from drought.

These meadow sites will be monitored and maintained during this pilot project.



For more information please visit:
vancouver.ca/pollinator-meadows

share photos with:
[#VanMeadows](https://twitter.com/VanMeadows)

- Explanatory signage
- Vancouver.ca project page
- Social media campaign
- Mixed response – both concern and support

Meadow Enhancements



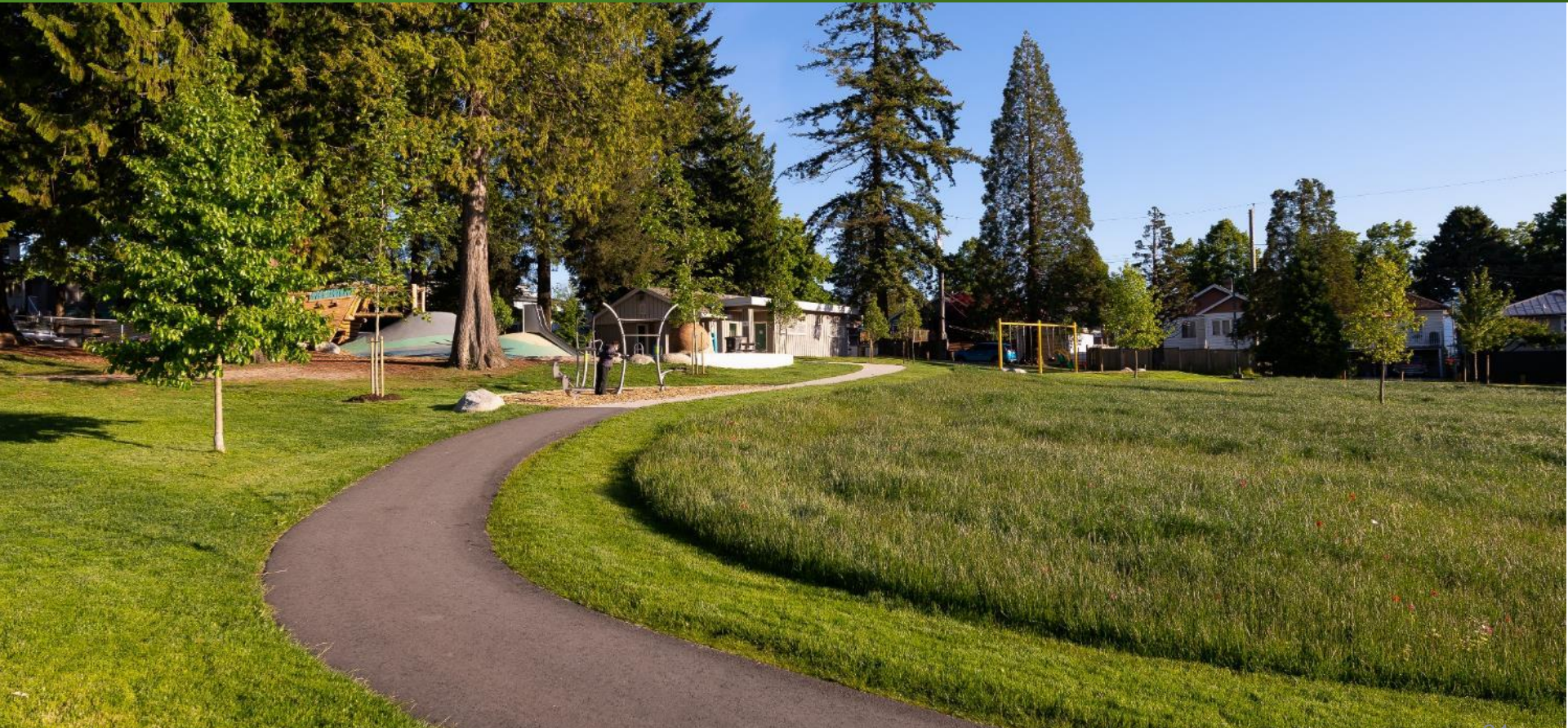
Mountain View Cemetery



Considerations







VANCOUVER MEADOWS BEST MANAGEMENT PRACTICES

DESIGN & LAYOUT

ENHANCED LOW MOW

CONTENTS

Information Sheet – Use for crew talks and post on works yard bulletin boards

2021 Meadow Map – Refer to this map to see the distribution of all the meadow sites in parks, golf courses, and park-managed boulevards

2021 Meadow Site Guide – Reference this overview table for details on meadow site size, preparation, and maintenance plan

Best Management Practices (BMP) – Share appropriate mowing regime BMPs with mowing staff to apply to the planned meadow types:

- **No Mow** – No mowing, manage for invasive plants as needed
- **Low Mow** – Annual mowing in turf conversion sites
- **Enhanced Low Mow** – Over-seeding & annual mowing in turf conversion sites
- **Wildflower Meadows** – Park Development meadow projects

Design Guidelines – Share this guide with mowing staff to visualize mown edges, pathways, and seating areas in meadows

Hazard Response Plan – Refer to the 3-phase response plan when hazards are perceived or observed by staff or the public

Quick reference – provides a summarised overview of the meadows and their benefits to Vancouver.

Site Maps – Provide the laminated maps to mowing staff to refer to on-site

Beeches & Downtown

- CRAB Park at Portside
- Creekside Park
- David Lam Park
- SEFC East Park
- Stanley Park
- Queen Elizabeth Park
- VanDusen

Golf Courses

- Fraserview
- Langara
- McCleery

North

- China Creek North Park
- Falaise Park
- New Brighton Park

South

- Kellarmey Park
- Memorial South Park
- Oak Meadows

West

- Almond Park
- Locarno Park
- Memorial West Park
- Prince of Wales Park

There are a number of small maintenance strategies to improve the success of meadows and improve public perception. These steps will reinforce the understanding that these meadows are welcoming and maintained:

1. IMPROVE TREE HEALTH

Consider growing meadows around the base of trees to minimize regular conflict between tree roots and mower. Meadows have been shown to both retain moisture and cool temperatures in the soils to the benefit of trees.

2. PUBLIC INTEREST

Encourage the public to interact with the naturalized areas by mowing footpaths and seating areas in the middle of meadows. These can be coordinated with firebreaks and desire lines. Paths should be minimum 2m wide.

3. PERIMETER TREATMENT

Consider phased mowing regimes around roadways and high visibility areas to exhibit to the public control and intentional meadow growth.

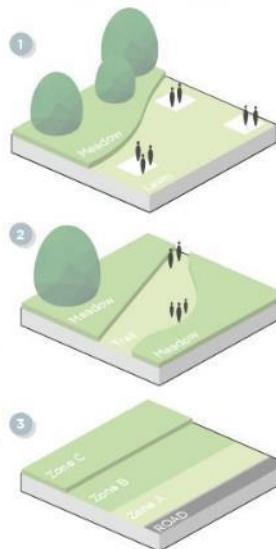
Zone A: Adjacent to roadways, drives and footpaths, regular mow this first zone as per standard lawn practices

Zone B (Optional): Mow at 50% regularity of zone 1, to allow some additional growth and blooming.

Zone C: Treat as per the chosen meadow BMPs.

INFORMATION & SIGNS

Ensure signs are placed at all meadows sites to inform the public about Park Board intentions and provide interest in the meadows. Signs should encourage public participation and provide contact details for



DEFINITION

A 'low mow' meadow is an existing passive-use turf area that has its maintenance reduced to once or twice per year, to allow native and naturalized plant species to bloom and establish.

- Improves ecological value of a site
- Supports native species of flora and fauna
- Improves soil health & hydrology

KEY POINTS

- Mow up to twice year (spring and/or fall)
- Mow a perimeter lawn edge (1-2m) around meadow
- Mow public trails through meadows
- Overseed wildflower seed to encourage species diversity

APPLICATIONS AND LIMITATIONS

After assessing the site, to see whether it can support the reduced maintenance aesthetic and avoid conflict with existing uses, 'low mow' meadows can be placed on the fringes of busy landscapes to provide interesting and diverse aesthetics to a space.

The perimeter edge and pathways can be mown on a regular basis, however, avoid mowing the larger meadows during May - August 15th as birds and mammals may be nesting within the vegetation.

MAINTENANCE

Perimeter Strip – Ensure meadows have a mown 1-2m lawn strip around the perimeter to exhibit ongoing care and maintenance. Mow with the same regularity as adjacent lawns.

Central Paths – mow footpaths and seating areas through the meadow to encourage public use

Monitoring – Regular inspections should be performed to control excessive site litter and observe any unexpected issues that may arise.

A late summer mow (after August 15th) can reduce risk of fire and encourage a second bloom, depending on seasonal rain.

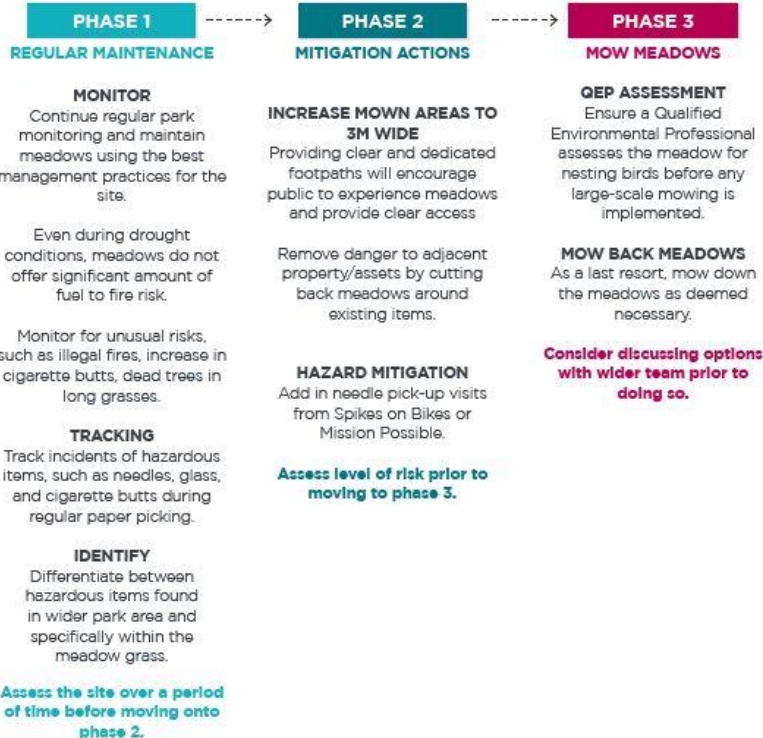
All staff expected to maintain the grassland should be properly trained and well coordinated with the site maintenance plan.

Community Groups – Consider partnerships with community groups, schools etc. to spread the seed and care for meadows. 'Seed balls' can be created with a soil/clay/seed mix, produced and distributed by community groups. Scatter onto meadow sites in spring to germinate and establish before summer droughts/winter frosts.

Fire Prevention & Risk Mitigation

HAZARD RESPONSE PLAN

In response to a complaint or perceived hazard, perform the following recommended steps:



Financial Considerations



THAT the Vancouver Park Board direct staff to continue the transition of 37 hectares of piloted low-use turf on park managed lands to natural management, and expand to a total of 42 hectares by 2030 (7% of total park managed turf).

- A. THAT the Vancouver Park Board direct staff to continue the transition of 37 hectares of piloted low-use turf on park managed lands to natural management.
- B. FURTHER THAT staff report back in Q1 of 2022 on the full extent of low-use turf on park managed lands that may be considered for transition to natural management.
- C. THAT the Vancouver Park Board direct staff to work with City of Vancouver Engineering Services to establish a plan to transition all suitable medians, road, etc., to natural management and report back.

