



Goats in the City: Targeted Grazing for Low-Impact
Management of Sensitive Landscapes

What on earth is this presentation about?

- Lake Park's beautiful (but often invisible) lake.
- A crazy idea – goats!
- A crazy idea that became an innovative, community-engaging, momentum-grabbing catalyst for water quality improvements.
- A crazy idea that had unexpected benefits.
- How to make this crazy idea mainstream.





The Water Tower

a great place to spend a vacation or a lifetime

CITY OF
Lake Park



Welcome to Lake Park!

a great place to spend a vacation or a lifetime

CITY OF
Lake Park



Silver Lake City Park

a great place to spend a vacation or a lifetime

CITY OF
Lake Park





Lake Park's Options

1. Do nothing... and miss an opportunity
2. Use heavy equipment... expensive and disruptive
3. Send city workers in with chainsaws... dangerous and temporary
4. Hire goats... and start thinking bigger!



- Founded in 2012
- Iowa's only professional targeted grazing company
- Launching a national network of affiliate grazing companies in local markets in 2017
- Large project capability all over the Midwest
- US Fish & Wildlife Service; Iowa Department of Natural Resources; state, county, and city parks; urban, suburban, and rural private properties



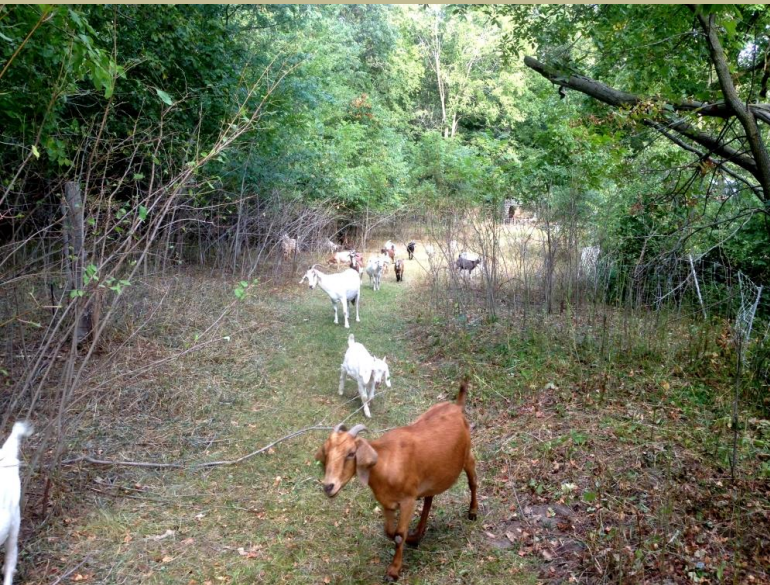


Targeted Grazing

The application of a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or landscape goals.

AKA “Conservation Grazing,” or
“Prescribed Grazing.”

Vegetation Challenges for Communities



- Dangerous/invasive/nuisance vegetation in parks, trails
- Vegetation management in sensitive places
- Choked drainages
- Overgrown utility easements
- Fire risk due to vegetative fuels
- Prescribed fire impractical
- Maintenance of sewage lagoons, retired landfills
- Surface mine reclamations and maintenance
- Undeveloped platted subdivisions, private properties

Why Grazing?

- Replicates historic conditions
- Promotes species diversity
- Builds soil
- Requires no (or less) herbicide
- Requires no (or less) mechanization
- Requires no (or less) burning
- Works on difficult and dangerous terrain
- Little-to-no erosion
- Saves labor



Why Goats?

- Browsers rather than grazers
- Preference for problem and invasive species
- Do not spread seeds
- Agility for rough terrain
- Virtually no erosion
- Convert nuisance into meat
- They're cute (seriously)





How it Works

- Electric netting and solar power make it possible
- Goats are concentrated in targeted areas and rotated
- Progress is closely monitored
- Can be used alone or with fire, manual removal, or herbicides



Strategies



- Stress/kill unwanted vegetation over time with grazing only
- Graze to reduce hazards and prep for follow-up
- Graze after manual removal to eliminate regrowth
- Graze for periodic clean-up



































Lake Park's Project

- Lake visibility project becomes shoreline restoration and water quality improvement project
- NRCS joins the team and IDNR 319 dollars are accessed
- Simple press releases and phone calls result in media attention, field trips, and a constant flow of traffic through the park

You are looking at a Native Prairie Shoreline Restoration

Shoreline Restoration is a practice that re-introduces native prairie grasses back to bank areas, where trees and shrubs have taken over. Once large trees and shrubs dominate a shoreline, sunlight isn't able to get through to the ground surface resulting in grasses dying off and exposing soil to wind, rain, and wave action. This can result in bank erosion, gully formations, and bank collapses.

City Park's shoreline was cleared using goats. These goats ate away all the unwanted leafy plants and weeds. The goats were more than happy to work on very steep slopes, keeping human workers safe, and eliminating the use of heavy equipment.

Why Native Prairie?
The answer is ROOTS! Prairie Grasses have deep roots that have the ability to hold soil in place and protect these banks from collapsing and eroding in to Silver Lake. Prairie Plants have 5-15 feet of fibrous root depth compared to Turf Grass (what you would find in your yard) that only has 3 inches of root depth. Most trees only have 2-3 feet of woody root depth.

Turf Grass	Lead Plant	Indian Grass	Compass Plant	Hoath Aster	Prairie Cord Grass	Big Blue Stem	Pale Purple Coneflower	Prairie Dogwood	Side Oats	Switch Grass	Little Blue Stem	Robin Hood	Purple Prairie Grass	June Grass
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0 feet														
3 feet														
6 feet														
9 feet														

Project Sponsors: Silver Lake Watershed Project, City of Lake Park, Silver Lake Park Improvement Association, and Goats on the Go.















Silver Lake

- 17,025 acres of watershed – mostly row crops
- A portion of city drains into lake
- 1,035 acres of lake
- 10.6 ft. max depth, 7 ft. average
- On impaired waterways list



Trappers Bay - 1930



Trappers Bay - 2013





Pre-Goats

You are looking at a...

Rain Garden

A Rain Garden is...
a shallow depression that is planted with deep-rooted native plants and grasses. The garden should be positioned near a street drain, downspout, or a driveway to capture rainwater runoff. Deep-rooted plants will absorb storm water runoff and prevent polluted water from entering the sewer system that drains directly into Silver Lake.

Native Plants Used...
Wood's Pink Aster, New England Aster, Purple Cone-flower, Stella D'oro Daylily, Spike Gayfeather, Raspberry Wine Bee Balm, Black-eye Susan, Feather Reed Grass, Little Bluestem

Deep-rooted native plants absorb storm water runoff.

Storm water runoff

Storm water is infiltrated through the soil matrix. This process removes pollutants from the water.

After infiltrating storm water runoff through the Rain Garden, clean water is drained to the storm sewer pipe, which is then drained to Silver Lake.

Project Sponsors: Water Quality Commission, Harris-Lake Park Community School District, 4 Evergreen Landscape and Design, Silver Lake Watershed Project, Silver Lake Park Improvement Association, Cohrs Construction Inc, Iowa Department of Agriculture and Land Stewardship, DNR Section 319, NRCS, Dickinson and Osceola Soil and Water Conservation Districts, and The City of Lake Park.

- One small rain garden project
- Community was not engaged
- Concept was abstract
- Hard to get traction

Post-Goats

- Broader public interest
- Concept associated with a visual cue – a mascot
- A sense of excitement – Lake Park in the news!
- Watershed study and spin-off projects
- A new economic development strategy - Lake Park as an outdoor paradise!





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Make it Happen in Your Community!

It's only a matter of time...What do your regs say?

“No horse, cow, calf, swine, sheep, goat, llama, camel, ostrich, peacock, chicken, goose, duck or other agricultural animal or any nondomestic animal shall be kept within the city’s corporate limits on any lot or parcel of land...”



Regulation Tips

1. What does “kept” mean? Understand that targeted grazing is a very temporary service, much different than raising animals continually.
2. Make an exception - most animal control/zoning codes make exception for rodeos, circuses, etc. Why not targeted grazing?
3. Set reasonable limits:
 - a. Goats and sheep only (guardian donkeys/llamas?)
 - b. Only females and castrated males
 - c. Limit “adult animal days” rather than total number of animals (e.g. no more than 400 per acre per year)
 - d. Set a maximum response time (rather than requiring 24 hour supervision from provider)
 - e. Require provider to be insured
4. Don’t be freaked out by things that sound scary but aren’t:
 - a. Horns
 - b. Electric fence
 - c. Manure

More Information

City of Salem, Oregon Resource Guide: Targeted Grazing with Goats (SRC 400-120(d)(3))

Prescribed Goat Grazing in Urban Settings: A Pilot Study of the Legal Framework in Nine U.S. Cities (Salter, MacDonald, and Richardson)

Questions?

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