

SAMPLE



2008 Program Application

Your site's designation as a Groundwater Guardian Green Site is based on the information provided in this application, so please be as thorough and accurate as possible. If you have any questions about any part of the application, including Section E, please contact The Groundwater Foundation at 1-800-858-4844 or guardian@groundwater.org.

Completed applications may be submitted to The Groundwater Foundation at any time by mail (P.O. Box 22558, Lincoln, NE 68542-2558), fax (402-434-2742), or email (guardian@groundwater.org). To maintain your designation, your application must be checked for accuracy annually so any changes in your operations are documented. If no changes have occurred, a simple indication of this fact is all that is needed to maintain your designation as a Groundwater Guardian Green Site. All information submitted to The Groundwater Foundation in this application is confidential, and will not be shared without the permission of the site manager.

To spotlight the good work you do, The Groundwater Foundation will send notice of your Groundwater Guardian Designation to both local and national media. Thank you for all you do to safeguard groundwater and other water resources!

A. CONTACT INFORMATION

Site Name: Rolling Hills Golf Course

Site Owner, Leaseholder, or Affiliation: Rolling Hills Golf Course, Inc.

Site Manager Name: Joe Miller

Application Contact Name (*if different from manager*): John Smith

Application Contact Job Title or Description (*please indicate any professional certifications, i.e. Certified Golf Course Superintendent, etc.*): Golf Course Superintendent (Certified Golf Course Superintendent - CGCS)

Site Address: 1234 Rolling Hills Way

Community/County: Anytown/Hall County

State: Nebraska

Zip Code: 68000

E-mail: johnsmith@rollinghillsinc.com

Phone: 402-555-1234

Fax: 402-555-2345

Website (*if applicable*): www.rollinghillsinc.com

Is your site located in a Groundwater Guardian Community? Yes No Don't know

(If you "don't know," visit www.groundwater.org and jump to the Groundwater Guardian page for a complete *Directory of Current Groundwater Guardians*.)

Groundwater Guardian Community Name:

Local Media Outlets (*please provide names and addresses if known*): Anytown Gazette, P.O. Box 156, Anytown, NE 68000

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Peak Seasonal Staff Level: 20

Brief Description of Staff Responsibilities regarding Site Landscape and Land Management (*100 words or less*): Staff is responsible for all aspects of site landscape and land management, including mowing, fertilizer and pesticide applications, adding new plants, irrigation, turf repair as necessary.

B. SITE INFORMATION

Please attach a site map or schematic to this application.

Number of Acres: 300

Latitude/Longitude (*if known*):

Location Description (*e.g., five miles south of Interstate 80 on Highway 10, on the edge of the city, etc.*): Located two miles east and one mile south of the town of Anytown, Nebraska.

Primary Purpose of Site: Golf

Secondary Purpose of Site (*if applicable*): Clubhouse with restaurant and meeting space for outside use

Date of Initial Development: March 1997

Months in Operation per Year (*please note if this amount is equivalent to your local growing season*): 9, March through November (equivalent to local growing season)

Does your site drain directly to certain water bodies? If yes, please describe (*e.g. in feet, yards, miles or watershed*): Yes, site is located .5 miles from the Little Blue Creek. The course also includes four water features.

Is your site located near a drinking water source? If so, please describe (*e.g. lake, well, river, etc.*): A drinking water well is located on-site.

Number and Type of Wells On-site (*e.g., active, non-active or back-up, and abandoned wells*): 3 active wells (one irrigation well, one public drinking water well for club house, and one private well for maintenance office and machine shed), 1 non-active abandoned well.

Brief narrative description of site including unique geological and historic land use conditions that could potentially impact land treatment and water quality (*200 words or less*): The site was previously used for agriculture, primarily corn and soybeans.

Local ordinances, if known, that reflect best practices (*i.e. anti-siphon, etc.*): Anti-siphon (backflow prevention)

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C. INTERNAL EDUCATION EFFORTS

Check as many as apply. Describe how you have educated yourself, staff members, field personnel, and/or other colleagues about the topics reflected in Section E (i.e. fertilizer and pesticide use, water use, potential contaminant source management, water quality protection) and how site management impacts water quality and supply. Please provide details for each item selected. Also include information about other educational resources and environmental stewardship programs with which your site is involved.

- Trade magazines:** Magazines related to turf management
- Local peer group meetings:** Nebraska Golf Course Superintendents Association, Nebraska Turfgrass Association
- Local extension agents:** Have worked with Hall County Extension on soil sampling
- Groundwater basics brochure:**
- Groundwater Foundation, USGS, or other partner websites:** Visited both after learning about the Green Site program
- Attended groundwater education event:**
- On-line courses:**
- Conferences:** Nebraska Golf Course Superintendents Association, Nebraska Turfgrass Association
- Other:** Turfgrass seminars
- Other:**
- Other:**
- Other:**

D. EXTERNAL EDUCATION EFFORTS

Check as many as apply. Describe any education efforts about the topics reflected in Section E (i.e. fertilizer and pesticide use, water use, potential contaminant source management, water quality protection) and the site's protection practices (including participation in this program) that have been directed to partners, customers, and/or constituents. Please provide details for each item selected. Also include information about other educational resources and environmental stewardship programs with which your site is involved.

- Worked with students conducting research on:** Irrigation methods
- Hosted educational tours of the site:**
- Hosted peer group meeting(s):** Nebraska Golf Course Superintendents Association
- Installed signage identifying low water use plants:**
- Printed groundwater protection tips on items given to site visitors:**
- Hosted educational events for youth:** First Tee
- Hosted educational events for adults:**
- Other:** Staff meetings
- Other:**
- Other:**
- Other:**

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E. GROUNDWATER-FRIENDLY PRACTICES SURVEY AND RELATED MEASURES OF ENVIRONMENTAL IMPACT

Note: Points are awarded for the answers to questions 1-32. Environmental impact sections are required, but no points are awarded. Exact calculations are preferred, but not necessary; your best estimates of environmental impact are sufficient. Choose only one response unless otherwise indicated.

1. How often is soil tested to determine nutrient requirements?

- Annually (10 points)
- Every other year (5 points)
- Every three years (3 points)
- Not currently testing (0 points)
- Not applicable – soil is not tested because no fertilizer is applied on-site
- Using alternative practice to determine nutrient requirement (10 points), please describe to earn points:

2. Is fertilizer applied based on nutrient analysis?

- Yes (10 points)
- At least 75% of the time (5 points)
- No (0 points)
- Not applicable – no fertilizer is applied on-site

ENVIRONMENTAL IMPACT FOR ITEMS 1-2

Estimated amount of fertilizer applied versus the amount recommended by the soil test: Fertilizer applied is based on the amount recommended by nutrient analysis.

3. Are label or agronomist recommended application rates followed during pesticide applications?

- Yes, always (10 points)
- Yes, at least 75% of the time (5 points)
- Less than 75% of the time (0 points)
- Not applicable – no pesticide is applied on-site

ENVIRONMENTAL IMPACT

Estimated amount of pesticide applied versus the amount recommended by the label rate or an agronomist: Label rates are always followed.

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4. Does the site have a written integrated pest management (IPM) plan for determining pesticide applications?

- Yes, and follow plan >75% of time (10 points)
- Yes, and follow plan <75% of time (7 points)
- No written plan, but follow IPM practices (5 points)
- No written plan and do not follow IPM practices (0 points)
- Not applicable – no pesticide is applied on-site

ENVIRONMENTAL IMPACT

Estimated percentage of pesticide reduced by choosing alternate control methods:
30%

5. When adding or replacing plants (e.g., turf grass, shrubs, trees, etc.) at your site, do you choose species that have a lower input requirement than the current plants?

- Yes, 90-100% of the time (10 points)
- Sometimes, 50-89% of the time (5 points)
- At times, 20-49% of the time (3 points)
- No, or less than 20% of the time (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated amount of fertilizer saved annually by using lower input plants (*pounds*):
400

Estimated amount of pesticide saved annually by using lower input plants (*gallons*): 50

6. Do you select new plants adapted to the climate of your region?

- Yes, 90-100% of total plant materials (10 points)
- Some, 30-90% of total plant materials (5 points)
- Less than 30% of total plant materials (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated gallons of water saved annually by using low water/maintenance plant materials: Around 1 million gallons

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7. Do you track irrigation water usage and modify practices to reduce water use?

- Yes, we track use and modify practices when necessary (10 points)
- Track use only (5 points)
- Modify practices but do not track use (5 points)
- No (0 points)
- Not Applicable – turf is not irrigated

ENVIRONMENTAL IMPACT

Estimated gallons of water saved annually from tracking/conservation practices

(subtract current use from pre-tracking/conservation use): 2-3 million gallons

8. Are your fertilizers and pesticides stored on an impervious surface in a secured facility capable of containing spillage?

- Yes, always (10 points)
- Yes, in a secure facility not capable of containing spillage (5 points)
- Yes, in a non-secure facility that is capable of containing spillage (5 points)
- No (0 points)
- Not applicable – no fertilizer or pesticide is stored on-site

ENVIRONMENTAL IMPACT

Monthly average during operation of fertilizer in storage on-site (*pounds*): 1000

Monthly average during operation of pesticide in storage on-site (*gallons*): 15

Average percent of fertilizer and pesticide stored on an impervious surface in a secured facility capable of containing spillage: 0, though 100% of our chemicals are stored in a secured facility

9. Are your fertilizers and pesticides mixed and loaded on an impervious surface capable of containing spillage?

- Yes, always (10 points)
- Yes, at least 75% of the time (5 points)
- No (0 points)
- Not applicable – no fertilizer or pesticide is mixed or loaded on-site

ENVIRONMENTAL IMPACT

Monthly average during operation of fertilizer mixed and loaded on-site (*pounds*): 750

Monthly average during operation of pesticide mixed and loaded on-site (*gallons*): 10

Average percent of fertilizer and pesticide mixed and loaded on an impervious surface capable of containing spillage: 0, they are mixed and loaded on an impervious surface, but one that is not capable of containing spillage

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10. Do you have a written spill containment plan? Is it communicated to staff members?

- Yes, written and communicated (10 points)
- Yes, written but not communicated (5 points)
- Yes, verbally communicated but not written (5 points)
- No (0 points)

ENVIRONMENTAL IMPACT

Number of spills contained in the last two years: 0 spills, 0 contained

Estimated amount of fertilizer contained (pounds): 0

Estimated amount of pesticide contained (gallons): 0

11. Is application equipment (i.e., sprayers and spreaders) visually inspected by a licensed applicator before each use?

- Yes, always (10 points)
- Yes, at least 50% of the time (5 points)
- No (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Average monthly number of times application equipment is used during the growing season: 4

12. Is application equipment calibrated at least quarterly during the growing season?

- Yes (10 points)
- No (0 points)
- Not applicable – no fertilizer or pesticide is applied on-site

ENVIRONMENTAL IMPACT

Average number of applications between calibrations: 2-3

Average percentage adjustment found during calibration: 1-5%

13. List the setback or no-application zone distances for applying fertilizer near surface water and wetlands, as set forth in your local and/or state regulations (if there are any), and the pesticides and setback distances, as required by the labels of the pesticides you are using:

- All distance(s) listed (10 points)
- Do not know (0 points)
- Not applicable – no surface water or wetlands nearby

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14. Do you maintain a setback or no-application zone around surface water and wetlands?

- Yes (10 points)
- No (0 points)
- Not applicable – no surface water bodies nearby

15. If you answered “yes” to item 14, is your setback or no-application zone on average:

- Greater than 50 feet from water and wetlands (10 points)
- 30-49 feet from water and wetlands (7 points)
- 10-29 feet from water and wetlands (5 points)

ENVIRONMENTAL IMPACT FOR ITEMS 13-15

Estimated surface area of the water or wetlands protected from fertilizer or pesticide applications: 2.5 acres

16. List the setback or no-application zone distances for applying fertilizer around active wells, as set forth in your local and/or state regulations (if there are any), and the pesticides and setback distances, as required by the labels of the pesticides you are using:

- All distance(s) listed (10 points)
- Do not know (0 points)
- Not applicable – no active wells on site

17. Do you maintain a setback or no-application zone around active wells?

- Yes (10 points)
- No (0 points)
- Not applicable – no active wells on site

18. If you answered “yes” to item 17, is your setback or no-application zone on average:

- Greater than 50 feet from active wells (10 points)
- 30-49 feet from active wells (7 points)
- 10-29 feet from active wells (5 points)

ENVIRONMENTAL IMPACT FOR ITEMS 16-18

Number of wells protected from fertilizer or pesticide applications: 3 active wells

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19. Do you alter or cease granular fertilizer and pesticide applications when wind speed is great enough to alter distribution?

- Yes (10 points)
- No (0 points)
- Not applicable – no fertilizer or pesticide is applied on-site

ENVIRONMENTAL IMPACT

Number of days when wind speed altered granular applications during the most recent growing season: 12-15

20. Do you alter or cease spray fertilizer and pesticide applications when wind speed is great enough to alter distribution?

- Yes (10 points)
- No (0 points)
- Not applicable – no fertilizer or pesticide is applied on-site

ENVIRONMENTAL IMPACT

Number of days when wind speed altered spray applications during the most recent growing season: 8-10

21. If you have non-active wells on your site, are they properly protected or sealed?

- Yes (10 points)
- No (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated number of wells protected as a result of proper maintenance: 1 non-active well has been properly sealed by a local well driller

22. How do you dispose of water from equipment washing?

- Contained and treated by a sanitary sewer system (10 points)
- Contained and treated on-site (10 points)
- No containment, but water does not drain to surface water (2 points)
- Solids contained, but water drains to surface water (2 points)
- No containment, water drains to surface water (including storm sewer) (0 points)
- Not applicable – no equipment is washed on-site

ENVIRONMENTAL IMPACT

Estimated daily average amount of water used for equipment washing (*gallons*): 1500

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23. How do you dispose of tank rinsate?

- Contained and disposed of off-site by a certified professional (10 points)
- Applied over an area of similar land use (7 points)
- Disposed into a porous area with dissimilar land use (2 points)
- Dumped onto an impervious area that drains to surface water (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated average monthly volume of tank rinsate (gallons): 450

24. Do you triple rinse or power wash used 2.5 gallon or greater plastic pesticide containers according to the label directions before placing them in the trash or offering them for recycling?

- Yes (10 points)
- No (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated average monthly number of 2.5 gallon or greater plastic pesticide containers discarded: 5

25. If you have a private drinking water well on your site, do you:

- Test your private drinking water well at least annually (10 points)
- Do not test private well water (0 points)
- Not Applicable

ENVIRONMENTAL IMPACT

Estimated number of individuals benefiting from testing: Any staff (<20 people) who drink tap water from the office or machine shed.

26. If your site generates wastewater that is treated on-site, do you:

- Arrange for a certified professional to regularly inspect, pump or otherwise service your on-site wastewater treatment system(s) (i.e., septic system, sewage lagoon, pit toilet) (10 points)
- Arrange for your on-site wastewater treatment system(s) to be regularly inspected, pumped or otherwise serviced, but not by a certified professional (5 points)
- Do not regularly inspect, pump or otherwise service on-site wastewater treatment system(s) (0 points)

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- Not Applicable – wastewater generated on-site is treated by a centralized sewer system inspected and serviced by another party
- Not Applicable – no wastewater is generated on-site (please explain)

ENVIRONMENTAL IMPACT

Gallons of waste or wastewater properly treated by your on-site wastewater treatment system(s), also the amount of waste or wastewater kept from negatively impacting area water resources: Roughly 200,000 gallons of wastewater treated annually

27. Do you have on-site fuel storage?

- Yes, above ground with secondary containment (10 points)
- Yes, above ground without secondary containment (5 points)
- Yes, below ground with regular monitoring for leaks (3 points)
- Yes, below ground without regular monitoring for leaks (0 points)
- Not Applicable - no on-site fuel storage

ENVIRONMENTAL IMPACT

Estimated annual on-site fuel use (gallons): 3000

Estimated annual on-site fuel storage (gallons): 3000

Cumulative size of storage tanks (gallons): 2 500 gallon tanks

28. Are toxic substances, such as batteries, tires, used motor oil and other potentially hazardous waste, disposed of or recycled through recommended channels?

- Yes (10 points)
- Some, but not all (5 points)
- Not handled on-site (5 points)
- No (0 points)

ENVIRONMENTAL IMPACT

Estimated annual amount of toxic substances disposed of appropriately: 10-20 tires, 100+ gallons oil, 12-15 batteries

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29. Are your parking areas designed and managed to minimize run-off and contaminant loading into adjacent or nearby surface water by featuring the following (check all that apply):

- Porous surfaces (5 points)
- Turf or other green zones between parking areas and adjacent surface water (5 points)
- Engineering the slope so run-off does not drain directly into water areas (5 points)
- Other, please describe (possible 5 points)
- Site contains standard impervious surface lot with no water treatment features (0 points)

ENVIRONMENTAL IMPACT

Surface area of parking lot(s) (acres): 2

Percent of each lot that is impervious: 0

Annual precipitation (inches): 22-25 inches

Width of turf or other green zones between parking areas and adjacent surface water:
500 feet to nearest water feature, .5 miles to Little Blue Creek

What is planted or utilized in the green zone to minimize run-off and contaminant loading: native vegetation and grass

30. Do you have a written water management plan to protect groundwater and surface water quality on your site?

- Yes (10 points)
- No (0 points)

31. If you do have a plan (i.e., answered “yes” to item 30), does it include the following (check all that apply):

- Emergency response plan for fuel or other hazardous waste spills (2 points)
- Potential sources of pollution at your site (2 points)
- Ponds, streams, lakes, wetlands etc. that could be impacted by practices at your site (2 points)
- Avenues for storm water runoff or leaching (2 points)
- Pollution prevention practices (2 points)
- A communication strategy for informing local source water managers or users (2 points)

ENVIRONMENTAL IMPACT

Description of changes in water quality, if any, you have documented since implementing plans: None documented at this time, plan to continue to monitor surface water in the future.

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32. Describe one or more changes you have made to improve your environmental practices in the past five years. Examples include using technology to lower fertilizer use, deep soil or leaf sampling to determine nutrient needs, increasing habitat for wildlife, recycling aluminum cans, etc. (2 points awarded for each change described, up to 10 possible total):

1. Recycled aluminum cans and plastic bottles
2. Lined water features to prevent seepage and loss
3. Converted 10% of course into native vegetation in last 5 years
4. Installed water meter to track irrigation water usage
- 5.

Describe one or more changes you *plan* to add in the next one to three years. (1 point for each change, up to 5 possible points)

1. Installation of computer controlled irrigation system
2. Construction of spillage containment area around fertilizer/pesticide storage
3. Continue to install native plants
- 4.
- 5.

BONUS POINTS

Do you have baseline data that can be used to evaluate the environmental benefit of participating in the GGS program?

Yes, add 2 points for each of the following:

- Water Quality
- Pesticide Use
- Fertilizer Use
- Waste Practices
- Water Use

No (0 pts)

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Acknowledgements

The Groundwater Foundation gratefully acknowledges the contributions and assistance provided by the following:

Groundwater Guardian Green Site Program Committee

- Michelle Bucklin, Cargill Corn Milling
- Robert Kuzelka, University of Nebraska-Lincoln School of Natural Resources
- Mark Langner, FarmLinks LLC
- Steve Merkel, Landscapes Unlimited LLC
- Sandra Sattler-Weber, University of Nebraska-Lincoln Department of Agricultural Leadership, Education and Communication

Groundwater Guardian Green Site Technical Advisory Committee

- Thomas Franti, University of Nebraska-Lincoln Department of Biological Systems Engineering
- Lynn Johnson, City of Lincoln Parks and Recreation
- Allen Krizek, Michigan State University Extension
- Mark Langner, Farmlinks Research Center
- Steve Merkel, Landscapes Unlimited
- Craig Romary, Nebraska Department of Agriculture
- Jason Vogel, United States Geological Survey Nebraska Water Science Center
- Rick Yoder, Pollution Prevention Regional Information Center

The Groundwater Foundation gratefully acknowledges the Nebraska Corn Growers Association and their Husker F.A.R.M. (Farmers Advocating Resource Management) program for their inspiration and assistance with the Groundwater Guardian Green Site survey. The Groundwater Guardian Green Site program is supported by the Nebraska Environmental Trust, the U.S. EPA Region 7 Pollution Prevention Program, and the W.K. Kellogg Foundation.

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Application Processing

Date Received: 1/7/08

Date Scored: 1/8/08

Date Site Notified of Score: 1/10/08

Application Scoring

Base Points Earned: 257

Bonus Points Earned: 2

Base Points Possible: 316

Percentage Score (Base Points Earned + Bonus Points Earned/Base Points Possible): 81.96%

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