

Brooks National Golf Club

Drought Contingency Plan January 1, 2013

Given the fluctuating environmental conditions Brooks National Golf Club has established the following **Drought Contingency Plan**.

Iowa Department of Natural Resources Water Use Permit #5558-R4

Effective 10/13/2009 – 10/12/2019

Permittee is authorized to withdraw water from East Okoboji Lake in the maximum quantity of 200 acre feet per year at a maximum total rate of 750 gallons per minute and from one Dakota Sandstone well, about 485 feet deep, in the maximum total quantity of 60 acre feet per year at a maximum rate of 300 gallons per minute for temporary storage in ponds with a total surface area of about 1 ¼ acre.

Withdrawal from said ponds shall not exceed the maximum total quantity of 260 acre feet per year at a maximum total rate of 1,650 gallons per minute.

Permittee shall submit to the department within 90 days of being notified by the department a plan for implementing day-to-day water conservation measures and for implementing emergency water conservation measures during periods of water shortage.

Our plan is based on 4 stages of drought restrictions:

1. Drought Watch: Up to 10% voluntary reduction
2. Drought Alert: 20% mandatory reduction
3. Drought Critical: up to 40% mandatory reduction
4. Drought Emergency: more than 40% mandatory reduction

Determining Use and Reductions

Average water used on golf course: high 180 acre feet, low 103 acre feet, 10 year average 140 acre feet

Total irrigated area: 150 acres

Total irrigated turf area: 149 acres

Percent reduction under each stage of drought

	Watch	Alert	Critical	Emergency
Greens (3%)	3	6	9	20
Tees (3%)	3	6	9	20
Fairways (27%)	20	50	80	100(off)
Roughs (53%)	30	60	90	100(off)
Driving Range (10%)	30	60	90	100(off)
Driving Range Tee (3%)	3	6	9	20
Landscape Areas (1%)	5	10	15	20

Total irrigated area: 100%

Irrigation Best Management Practices

1. Visually inspect all irrigation system components for wear and leaks
2. Utilize proper cultural practices that encourage vertical water movement
3. Clean off equipment with pressurized air instead of water
4. Utilize wetting agents to maximize the effectiveness of the water that is applied
5. Utilize more hand watering rather than turning on irrigation heads

Computerized Irrigation System Management

Brooks operates a Toro SitePro Central computerized irrigation system that enables us to make daily changes to site specific watering areas on the golf course with the click of a mouse. This technology allows us to incorporate percentage reductions quick and easy.

All sources of water are vital during a drought and we will show restraint during these times to demonstrate responsible resource management. Golfers may see a reduction in course conditions when the drought contingency plan is enacted. Please contact Brett Hetland, CGCS for more information at (712) 332-2675.