To: CCS Athletics

From: Gloria Thomas Lengel, Director, Go Green Initiative

Reference: Irrigation

Below are the recommendations from the Cumberland County Facilities Operation's Guidelines, PWC requirements (we are under NC mandatory conservation plan at all times in our area) and NC DENR Water Quality Section on The Fayetteville Cumberland County area. I have also included NCSU Cooperative Extension information about Turfgrass Irrigation Management system (TIMS), which is a great practical application for irrigation to conserve. There is information about Bermuda grass fields and rye overseeding. The Fayetteville PWC requirements and recommendations from Facilities Operations Guidelines as well, take precedence over all other recommendations for management.

(From: Cumberland County Facilities Operations Guidelines
IRRIGATION

Follow PWC odd/even schedule even if your school is served by well water. Daily watering is not necessary. Over watering can increase turf disease and create anaerobic soil conditions. Mature turf can withstand moderate drying and this will increase root growth. At the beginning of each growth season, make sure your irrigation time-clock and rain sensor are operating properly. Check each zone for proper coverage. Athletic directors are responsible for the school's irrigation systems. Adjustment to irrigation time clocks must be coordinated by them with the school's plumber. The plumbing department may be reached at 678-2399 or 678-2560, claywade@ccs.k12.nc.us.

Irrigation Guidelines from North Carolina State University Department of Crop Science

Routine watering of athletic fields is a significant and continuing water use for many educational and recreational institutions. In times of short water supply, the amount of water used to maintain turf grasses can and must be reduced. This prescription for conservative water application for turf survival was developed with the assistance of turf grass management specialists from N.C. State University. This guidance acknowledges player safety and the investment made in good athletic fields, but does not support cosmetically green grass. For non-essential fields the guidance represents more than an 80% reduction in water required in the absence of rain.

Non-essential fields can be defined as fields that have been taken out of play or do not expect to receive play in the near future.

- Such fields should be irrigated lightly (1/4 inch of water per application). This light rate is required to prevent excessive plant loss and erosion, and will not stimulate growth. Irrigation frequency will depend upon turf composition.
- In general, fields comprised of tall fescue should receive this light rate every two weeks, whereas Bermuda grass and Kentucky bluegrass fields will go dormant or semi-dormant and can go without water for up to four weeks.
- When a non-essential field is returned to play, the irrigation practices discussed below for essential fields should be implemented six weeks before play is scheduled.

Essential fields can be defined as fields that receive play or are expected to receive play in the near future. (Important note: Hard and dry fields are potentially unsafe and can increase the possibility of player injury.)

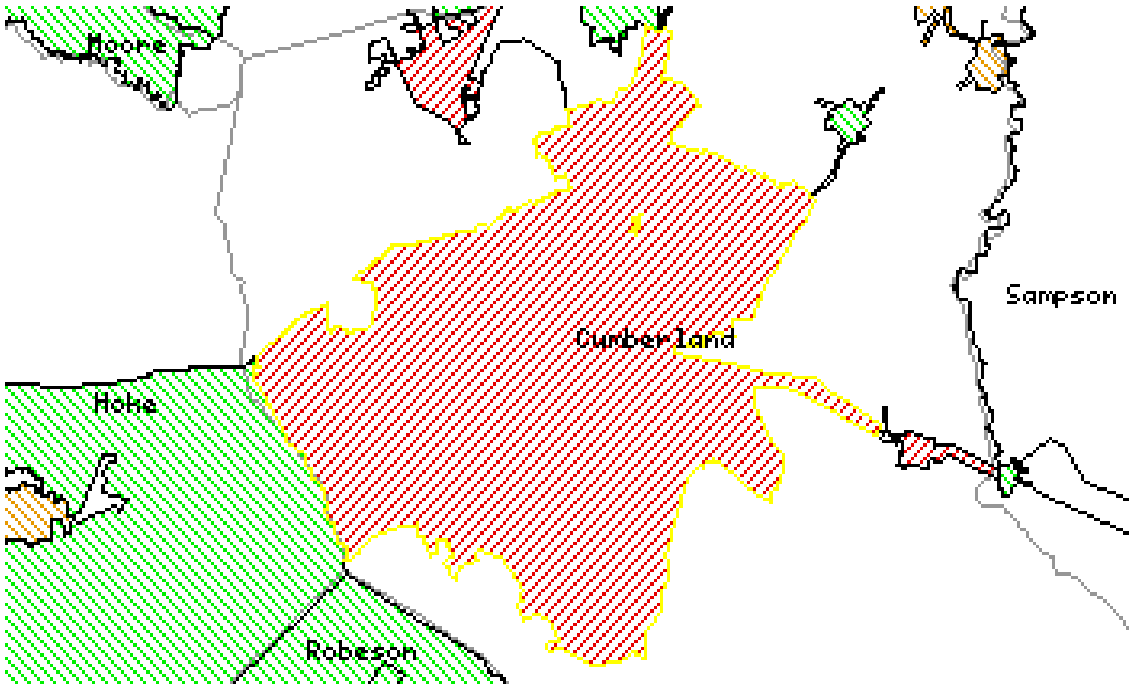
- Essential fields should be irrigated to moisten the soil to a depth of six inches each time the field is irrigated. This should require no more than one inch of water (620 gallons of water per 1,000 sq. ft.) per application.
- It is best to irrigate early in the morning (4-6 a.m.) when winds are calm and there is little evaporative loss. Empty cans placed around the field can help determine the amount being applied. A soil probe can also be used to determine the depth of soil moisture.

- The field should not be irrigated again until symptoms of wilt (folded or curled leaves, foot-printing or bluish-green color) are apparent on 50 percent of the field. This will actually encourage deep rooting and result in more drought tolerant plants.
- It is not essential to over-seed most Bermuda grass fields in the fall with ryegrass. Bermuda grass fields can often withstand moderate play even though the grass is dormant.

System status for Fayetteville

From: PWC website http://www.faypwc.com/wWatering_schedules.aspx
This water system (Fayetteville) has submitted a water shortage response plan.

Click **View Plan**



PWC water customers are reminded to follow the year round Odd-Even schedule for outdoor watering.

Permit	Facililty	Prior Status	Changed	Reason for restriction	Comments
03-26-010	Fayetteville	**Mandatory**	2012-06-18	Seasonal	Odd/Even watering May thru September.
03-26-010	Fayetteville	**Mandatory**	2011-05-12	Seasonal	
03-26-010	Fayetteville	**Mandatory**	2011-05-12	Seasonal	
03-26-010	Fayetteville	**Mandatory**	2011-05-12	Year Round	

Even Addresses (ending in 0,2,4,6,8)
Monday, Wednesday, & Saturday

Odd Addresses (ending in 1,3,5,7,9)
Tuesday, Thursday, & Sunday

Following these guidelines is a simple step that goes a long way to conserve our precious water supply, and it helps us be better prepared for drought conditions.

Be sure to think before you water. Don't water *just because* it is your day. Too much water can actually be harmful to your plants. And, don't forget to adjust your sprinklers to water *only* your landscaping, and turn off your sprinklers when it rains. Don't water when it's windy or during the heat of the day.

PWC thanks our customers for cooperating in the Even/Odd water conservation program. *It only applies*

to sprinklers (through your hose or automatic systems). You can still hand water, wash your car, etc. any time.

Some other resources for irrigation and turfgrass: (though most publications and talking with the master gardeners; overseeding is not recommended for Bermuda grass as it creates problems with increase thatch and die out spots. It should be taken up before Bermuda season begins.)

http://turf-ims.ncsu.edu/WaterCalc.aspx (TIMS-turf irrigation management system)

http://www.turffiles.ncsu.edu/Keywords/ryegrass.aspx#AR000466 (Removal of Rye from Bermuda)

http://www.turffiles.ncsu.edu/Athletic_Fields/Default.aspx#MC000024 (Bermuda grass athletic field management)

http://www.turffiles.ncsu.edu/Athletic_Fields/Default.aspx#ob (Bermuda grass)