

Regulations

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

It seems every year a new rule or regulation comes along to affect the way we do our jobs. It shouldn't be surprising since the state and national politicians are looking for ways to make an impact and make things better for us and the environment. Unfortunately making things better for one group comes at a price of time and usually money for the end user. It may be extra cost in doing things different or the cost of increased paperwork.

Not all changes are new laws but many come about by new or stronger enforcement or just a different interpretation of old rules. The golf industry has survived AG-29 and NR-151 that effected how we apply and report fertilizers and chemicals with little problem. It has added extra costs in regular soil samples, and time for reporting, training and planning. In the next few years there a few new things that will add challenges to our jobs a turf managers.

TIER 4 Emission Standards

Many regulations affect the manufactures that we buy products from and go unnoticed by us until we wonder

why that engine is different or why the price has increased on our equipment. Most of these changes have to do with vehicle and engine emissions and the effort to reduce green house gasses in response to global weather changes. The technology is available to reduce greenhouse gasses but the issue is at what cost in dollars and engine power loss. In a competitive sales market manufactures are not going to increase the cost of their machine to possible save the ozone layer. Since manufactures are not going to voluntarily add cost to the machines, Congress and the Environmental Protection Agency will force them to change with new regulations.

One change coming January 1, 2013 is called Tier 4 Emissions Regulations. These new regulations will require expensive changes to 25 to 100 horsepower diesel off road engines used in mowers and tractors. Larger engines have already gone through this change and now it is the small engine manufactures turn.

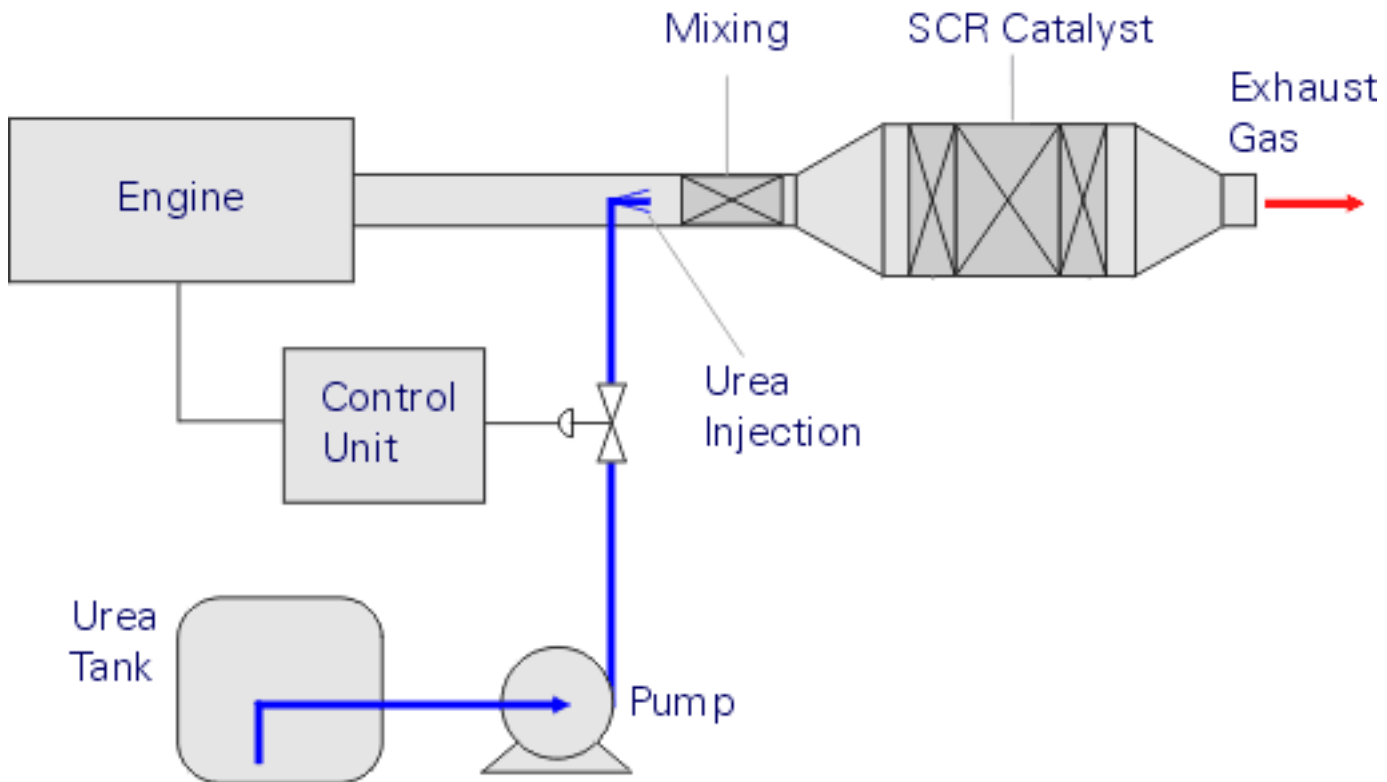


Diagram of a Typical SCR System Using a Urea Injection Pump to Change Exhaust Fumes

The challenge for manufactures is small engines fit in small places so it is harder to meet the new rules for a small engine than a big tractor engine where there may be more room under the hood. The other challenge is how to meet the regulations without increasing cost any more than necessary. The industry expects engines made with the new technology will cost 4-9% more. When the same \$50,000 dollar rough mower costs \$54,500 in 2013 it will challenge the bottom line. \$4,500 is a lot of rounds of golf or membership fees in an already tight budget.

The other downfall is there will be less engine choices available as manufactures drop certain lines rather than modifying the design. The goal for the EPA is to reduce engine emission of particulate matter and nitrogen oxides

by 90% of the current standard.

There are two main theories in reducing emissions that have worked in the larger engines. The first is uses cooled exhaust gas recirculation (EGR) to reduce nitrogen oxides (NO_x) and a diesel particulate filter (DPF) to replace the muffler and capture particles to be burned off either through a regeneration process or a passive self generating system. The second major method uses selective catalytic reduction (SCR) to achieve the reductions by treating exhaust gasses after they leave the engine with a fluid blend of urea and water called diesel exhaust fluid (DEF). This process converts the NO_x into nitrogen gas (N₂) and water (H₂O).

The positive of small engines being last in regulation is most of the manufactures have proven methods to reduce emissions from the larger engines. From my research it is clear most manufactures have picked one method or the other and have very convincing arguments why theirs is better, long lasting and easier for the consumer. This change will reduce emissions but at a increased cost and possibly less power per horsepower. Golf courses can save a few dollars by planning purchases before the regulations take place in 2013.

Water use fees and permits -

New and old regulations are changing how we get water, where we store water and how we dispose of water from our properties.

Wells have been regulated and recorded for a long time in Wisconsin but 2011 marks the first time we have had to pay a water use fee of \$125 for surface and groundwater withdrawals while 2010 marked the first time water users in the Great Lakes Basin had to report water use. By Dec 8, 2011 all users in the Great Lakes Basin are required to have a permit. If you have not received a invoice for your 2011 water use you should contact the DNR.

For both the water use fee and the use permit the ability or capacity to withdraw 100,000 gallons a day or 70 gallons per minute is the determining factor. There is only one fee per property as long as multiple wells or wells and surface pumps are on the same contiguous property. The fee goes up for properties that draw over 50,000 million gallons per year in the Great Lakes Basin.

A \$125 fee for water use is not a great hardship for users and the revenue will be used to build a statewide water resource inventory and water conservation programs. These are good things but the fear is now that the system is in place to charge a fee it will be easy to increase that fee and implement future water use restrictions based on annual reporting.

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MS4 storm water rules -

MS4 requirements are federally driven to reduce the amount of pollutants in municipal storm water. Some municipalities cover the costs associated with storm water management through the property taxes while others charge a fee to property owners based on the square footage of non-permeable areas. (rooftops, driveways and sidewalks) For a golf course this fee can become costly when all rooftops, parking areas and cart paths are taken into consideration. In theory golf courses should be rewarded for the amount of green space and natural creeks and ponds we have that catch pollutants. However the fees are only based on impermeable surfaces, there is no reward for cleaning the water before it leaves your property.

The other costs associated with new construction or remodeling is the requirement to have detention or retention ponds to allow pollutants to settle out before reaching the waterways or storm sewers. These small ponds you see next to every new office or commercial building can quickly become a maintenance problem with algae, weeds and geese becoming a nuisance. The NR151 and the nutrient management programs all of us should be following are the result of trying to reduce pollution in storm water runoff and part of MS4 requirements.

Underground fuel tanks -

As part of our annual inspection I was told someone on our property needed to be trained and pass the Wisconsin Underground Storage Tank Operator Examination by January 1, 2012. The training for Class A for owners and Class B for day to day operators are the same while Class C training is for on site employees. Class A and B operators can train Class C employees themselves without investment in class time or tests.

The class and test covered record keeping, the training requirement, leak detection, leak response and cleanup, equipment maintenance and employee training. I took a classroom session put on by Barker Lemar but there are online sessions available. More information can be found at http://dsps.wi.gov/er/ER-BST-FedRegUST_Operator-Training.html.

Ponds and creeks -

Most golf courses have ponds and lakes that are either man made or man enlarged to enhance the golf course and to supply irrigation water. The topic of bank maintenance, tree removal near waterways and even getting balls out of the ponds came up as a topic on Noernet last fall. I immediately thought it would be a good article for The Grass Roots.



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After a lengthy discussion with Jennifer Jerich from the Wisconsin DNR I felt a bit overwhelmed with information. Water use and rights offer no easy answers. History of the waterway, navigability of the water and where it goes all play into what you can and cannot do with your ponds.

My goal when researching this topic was to provide readers a simple guide to use in making decisions regarding ponds. I did learn the topic is too complicated to explain in a couple pages and worse varies from county to county so I suggest in the offseason you contact your local water use regulator and ask any questions you have. Don't wait until your going to start a dredging or stream bank project and expect overnight answers. You can find a list of county contacts at http://dnr.wi.gov/waterways/about_us/2011Contacts.pdf.

Some questions I asked and take home messages I have to help you prepare for calling your agent follow below.

- What year was the pond built, how was it built and what was there before?
- Can we use a winch and wheel to retrieve balls? That is a case by case basis. There is a fine line between dredging and dragging a wheel across the bottom of the pond. Is your pond private or navigable and was your pond permitted originally? If so you can usually dredge and maintain your pond to the original specifications but only if your permit allows maintenance.
- Is your pond navigable or connected to a natural body of water? That determines if you have a public or private waterway and in many cases takes a determination by the state contact. Just because you built the pond and it is surrounded by your property does not make it private.
- Can I cut down trees in the waterway? That is usually determined by shore-land zoning rules that are based on state rule, but can be made more restrictive by individual

counties.

- Can I fix eroding banks with rock rip rap? Streams maybe, ponds probably not but it depends on the size of your pond, the wave action and the original permit. Vegetative rip rap is the allowed method to repair banks on navigable or public waterways.



Typical pond erosion where the bank is being eroded away. Your options for repair may be limited depending on your pond permit.

- A previous property owner built a pond without getting a permit can I get one now? Two main factors come into play. First was a permit needed then and two would you have gotten a permit then. The adage it is better to ask for forgiveness later than permission now is not always true when it comes to ponds. I would proceed with caution in this case and do research before inviting a DNR agent to your property.

Again call your agent and get your answers well in advance of your next water project. It will save you and your ownership future headaches.

Next to come will be the new FCC regulations on two way radios and wireless communication frequency in January of 2013. Watch for that and other exciting things next month.

Regulations will always be changing either through new rules or new interpretations. Watch for things that affect your club and be sure to inform your national and state governmental regulations chairs for guidance and input. Locally Colin Seaburg and Mark Storby are the WGCSA co-chairs for governmental regulations.



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