

Example of how changing inputs affects outputs in the NAQSAT

to assist client in meeting their objectives.

Before starting the site assessment, on the NAQSAT website review the on-line “User Manual”. It covers some key program requirements to save inputs and avoid losing data. This is critical during the development of the baseline condition and the planned condition that meets the client’s objectives.

Go the website: naqsat.tamu.edu and select Dairy/National Air Quality Site...

Example 1: Under Dairy, fill out questions for the land application section only as shown below:

manure Storage (please complete all questions in this section)

Land Application

Where does manure go?

Moved offsite (sold or given away) directly from the housing

Composted or stockpiled, then sold or given away

Year-round pasture-based

Land applied

What form of manure is land applied? (Check all that apply)

Solid

Liquid

Do you typically... (Select the predominant practice)

inject?

incorporate within 24 hours?

incorporate 24 hours or greater following application?

irrigate?

Surface applied and not incorporated

Go to bottom of page and click “Get Results”

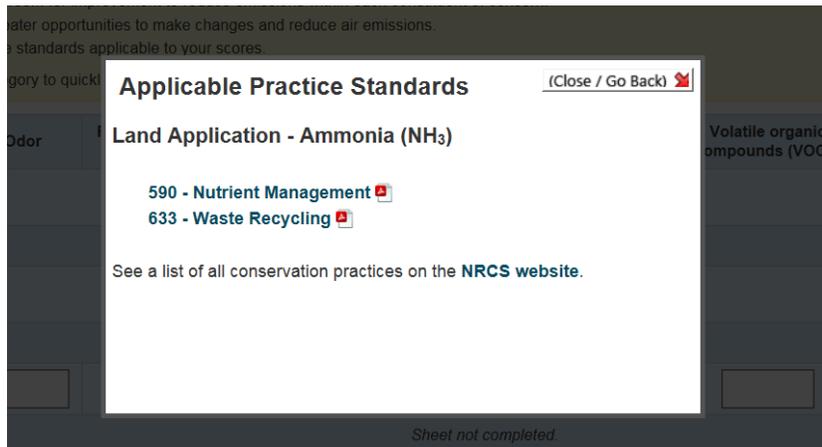
This will show an effectiveness report with only the land Application completed with all boxes being totally white showing many opportunities to make changes and reduce air emissions.

Click on a management category to quickly modify your answers.

Management Category	Odor	Particulate Matter (Dust)	Ammonia (NH ₃)	Hydrogen sulfide (H ₂ S)	Methane (CH ₄)	Volatile organic compounds (VOCs)	Nitrous Oxide (N ₂ O)
Animals and Housing				Sheet not completed.			
Feed and Water				Sheet not completed.			
Collection and Transfer				Sheet not completed.			
Manure Storage				Sheet not completed.			
Land Application		N/A					N/A
Mortalities				Sheet not completed.			
On-farm Roads				Sheet not completed.			
Perception				Sheet not completed.			

Print My Report View a print version of your Saved Session Information:

If you left click on a white box, it will show applicable practices as shown below, however in many cases it is management practices that will reduce issues.



To improve the situation hit **“Go Back”** in the box and then **“double click”** on the word **“Land Application”** to go back to the survey questions. This time select the following answers as shown below:

Land Application

Where does manure go?

- Moved offsite (sold or given away) directly from the housing
- Composted or stockpiled, then sold or given away
- Year-round pasture-based
- Land applied

What form of manure is land applied? (Check all that apply)

- Solid
- Liquid

Do you typically... (Select the predominant practice)

- inject?
- incorporate within 24 hours?
- incorporate 24 hours or greater following application?
- irrigate?
- Surface applied and not incorporated

Now go to **“Get Results”** and you will see some significant improvement.

Manure Storage	Sheet not completed.						
Land Application		N/A					N/A
Mortalities	Sheet not completed.						

Next, double click **“land Application”** and change selection to inject and then manure exposed in injection slot as shown below.

What form of manure is land applied? (Check all that apply)

- Solid
- Liquid

Do you typically... (Select the predominant practice)

- inject?
 - What portion of the field is manure left exposed on the surface?
 - 100% of the manure is covered
 - All manure is covered except on the headlands where manure is left exposed
 - Manure is left exposed in the injection slot
 - Manure is left exposed in the injection slot and the headlands
- incorporate within 24 hours?
- incorporate 24 hours or greater following application?
- irrigate?
- Surface applied and not incorporated

Hit **“Get Results”** and see below:

Land Application		N/A					N/A
Management Category	Sheet not completed.						

This shows you would be doing a great job on various air quality parameters when injection is done.

Example 2: (Not all steps listed)

Still in Dairy select Animals and housing and go with **“Freestall/tiestall/Stanchion with lot, >50% wet, lot is deep wet manure, morning scrap, and harrowing morning (Racking the beds). “Get Results”**

Management Category	Odor	Particulate Matter (Dust)	Ammonia (NH ₃)	Hydrogen sulfide (H ₂ S)	Methane (CH ₄)	Volatile organic compounds (VOCs)	Nitrous Oxide (N ₂ O)
Animals and Housing	<input type="text"/>			<input type="text"/>	<input type="text"/>	<input type="text"/>	N/A
Feed and Water	Sheet not completed.						

Now if you left click on a white box you would get these practices, but you should go back and change some answers that show improved management.

Applicable Practice Standards (Close / Go Back) ✖

Animals and Housing - Odor

- 367 - Roofs and Covers
- 442 - Sprinkler System

See a list of all conservation practices on the [NRCS website](#).

Now select **“Dry groomed regularly, up to 25% manure covered, varied surface and wetness and hit. “Get Results”**

Management Category	Odor	Particulate Matter (Dust)	Ammonia (NH ₃)	Hydrogen sulfide (H ₂ S)	Methane (CH ₄)	Volatile organic compounds (VOCs)	Nitrous Oxide (N ₂ O)
Animals and Housing					<input type="text"/>		N/A
Feed and Water	Sheet not completed.						

Now a significant improvement. Left click the Methane box to see what practices apply as shown below:

Applicable Practice Standards (Close / Go Back) ✖

Animals and Housing - Methane (CH₄)

- 367 - Roofs and Covers

Close and click Animals and Housing, go with Dry full Clean and Dry throughout and well drained.

Management Category	Odor	Particulate Matter (Dust)	Ammonia (NH ₃)	Hydrogen sulfide (H ₂ S)	Methane (CH ₄)	Volatile organic compounds (VOCs)	Nitrous Oxide (N ₂ O)
Animals and Housing					<input type="text"/>		N/A
Feed and Water	Sheet not completed.						

Slight improvement in volatile solids but a reduction in Dust. Maybe the issue to get cleaner stalls, alleys, and open lot is having a storage. Or is Particulate Matter a bigger issue? If so go back and try again.

Implementation

1. Do the assessment for the applicable animal group. During the process you and the client will see the various response options. Select those most applicable for the current operation. Save that report and copy URL. This is current baseline condition. Print out at a later time. This would be done for each animal group.
2. The process will force the client to look at various aspects of their operation.
3. Look at the Effectiveness Results page and target those management categories with the higher number of white boxes.
4. Go back to that category and see if there are any opportunities to reduce odor or emissions that the client is interested in. This is an interactive process. Go back and forth in one section to see the changes. In the end, select those that meet the client's objectives. Something they can implement on their own or by adding conservation practices that they plan to do.
5. Do this for each category. Save the ones that the client wants.
6. This will be the second report. Save the URL and Print out a later time.
7. These two reports along with a summary statement will meet the requirements for doing the NAQSAT. Plan to the clients objectives.