

Nutrient Reduction Strategy Practice List

The practice list for nitrogen and phosphorus loss reduction was established by the Science Assessment Team as part of the Iowa Nutrient Reduction Strategy. The Strategy is intended to be a living document that can be updated with innovative practices proven to have a positive water quality impact. The procedure for requesting a practice be added to the non-point source practice list was established as part of the first annual report to the Governor on the Nutrient Reduction Strategy. This procedure is on page 10 of the 2013-2014 Annual Progress Report found at: <http://www.nutrientstrategy.iastate.edu/documents> and is copied below.

The Science Assessment Team led by College of Ag and Life Sciences - Iowa State University developed a set of practices shown by research to reduce the loss of nitrogen and phosphorous to surface water.

The practice table also included the estimated average and standard deviation of loss reduction for N and P concentration or load. The set of practices and estimated effectiveness was based on the research available in 2012 when the report was prepared. The practice list is expected to be a living document as new practices are identified and proven and the performance and predictability of existing ones improves. The process outlined below is the recommended method for updating the Iowa Nutrient Reduction Strategy non-point source approved practice list.

1. The CALS Dean appoints the Science Team and asks the Director of the Iowa Nutrient Research Center to coordinate the review with the Science Team.
2. The Science Team reviews the Non-Point Source Practice Lists to:
 - a. update the average and standard deviation of existing practices
 - b. add new peer reviewed practices that reduce the loss of nutrients to surface water.
3. A practice may be revised or a new practice added to the practice list by the following:
 - a. A proposal is submitted to the Director of the INRC before July 1 each year. The proposal shall include:
 - i. Peer reviewed article(s) showing impact of the practice on water quality and crop yield.
 - ii. Or, present research reports from credible sources with data for review by the Science Team.
 - iii. Consistent with the original NRS Science Assessment, the research and data should be from Iowa or states with comparable soils and climate.¹
4. Science Team meets during the fall and determines if:
 - a. Practice list values for existing practices should be revised and
 - b. If new practices should be added to the practice list. Science Team also assigns the average and standard deviation for the new practices added to the practice list.
5. The Science Team estimates the cost to implement the practice, cost per unit

of nutrient reduced and the impact, if any, on crop yields.

6. Science team publishes updated practice list for non-point sources that becomes an addendum to the Iowa Nutrient Reduction Strategy. The published report is accompanied with the explanation of any new practices added and references to the original published peer - review article. The updated practice list is posted at www.nutrientstrategy.iastate.edu .

Practice List Updates as of October 29, 2019

Since the development of the initial Iowa Nutrient Reduction Strategy Practice list, three practices have been added to the list using the procedures outlined above. The practices, date of inclusion, and average nutrient reduction of the new practices are listed in Table 1.

Table 1. Practices added to Iowa Nutrient Reduction Strategy Practice list

Practice	Date Included	Average % Nitrate-N Reduction (Std deviation)	Average % Phosphorus Reduction (Std deviation)
Saturated buffers	9/24/2014	50	-
Blind inlet	8/5/2016	-	50
Multi-purpose oxbow	8/20/2019	42	-

Note:

ⁱ Statement was in original Science Assessment, but not in the 2013-14 Annual Progress Report.