



FARMER GUIDE TO FIELDPRINT PLATFORM 4.0

In July 2021, Field to Market®: The Alliance for Sustainable Agriculture released Version 4.0 of the Fieldprint® Platform. Explore how you can harness the enhanced science behind 4.0 to understand the environmental impacts of your operation and identify opportunities for continuous improvement.

Meet the next generation of the industry's most widely recognized sustainability assessment tool for commodity crop production in the United States.

What's New in Fieldprint Platform 4.0

In July 2021, Field to Market®: The Alliance for Sustainable Agriculture released Version 4.0 of the Fieldprint® Platform. This major release coincides with Field to Market's annual science release and includes several important enhancements to the Fieldprint Analysis which is generated for farmers and the value chain.

Fieldprint Platform 4.0 introduces two major new enhancements to the science behind Field to Market's suite of outcomes-based sustainability metrics, enhancing the Water Quality metric and introducing a new quantitative approach to estimating soil carbon sequestration potential of specific practices on your operation.

Farmers should use this quick start guide to explore the benefits of these major upgrades, as well as access technical guidance in Appendix A.

Version 4.0 enhancements include:

- **Water Quality Metric:** replacing the NRCS Water Quality Index (WQI) tool with Stewardship Tool for Environmental Performance (STEP, also developed by NRCS).
- **COMET-Planner Scenario Tool:** implementing NRCS COMET Planner as an optional Soil Carbon Scenario Tool within the online Fieldprint Calculator.
- **Enforcing USDA Wind Erosion Prediction System (WEPS) Calibration Mode:** enforcing use of crop calibration mode for wind erosion model calls.
- **Minor Enhancements:** various other minor enhancements to improve Platform usability, accuracy, reliability and performance.



What should I know about the updates being made to Field to Market's Fieldprint Analysis?



WATER QUALITY

Improving regional water quality through reduction in sediment, nutrient and pesticide loss from U.S. cropland.

Replacing the index-based score available from the Water Quality Index, the updated Water Quality metric using NRCS STEP allows farmers interested in understanding their water quality to target loss pathways and make management adjustments that can have the largest impact at the field and landscape level.

This updated analysis will be comprised of four parts, with each part representing a nutrient loss pathway by water source. Specifically, NRCS designed STEP to model both nitrogen and phosphorous loss to surface and subsurface water sources.



SOIL CARBON

Increasing soil carbon sequestration on U.S. cropland.

COMET-Planner is a scenario tool to evaluate multiple conservation approaches, allowing growers to outline the potential for soil carbon sequestration based on various practice scenarios.

COMET-Planner is available as an integrated, optional tool within the Fieldprint Platform to evaluate options and document the impacts of various management techniques on soil carbon. The Soil Conditioning Index (SCI) will remain in place as the Soil Carbon metric, which allows farmers to assess the directional improvements to your operation's soil carbon over time.



SOIL CONSERVATION

Reducing soil erosion on U.S. cropland.

While Field to Market has not changed our Soil Conservation Metric, Version 4.0 introduces an upgrade to the metric calculation by enforcing calibration of the Wind Erosion Prediction System (WEPS). This change results in more accurate calculations by using actual yield data to adjust modelled vegetative growth based on actual crop yield. This allows farmers to more accurately understand their Soil Conservation across highly erodible fields and underscores the benefits of soil health principles, e.g. keeping the soil covered and reducing disturbance.

Key Takeaways for Farmers

- The Water Quality metric will require minor updates to required data for the Fieldprint Platform in order to allow for better documentation of conservation practices and field management improvements. [Download an updated checklist highlighting what data you should have on hand.](#)
- If you plan to explore changes in your Water Quality or Soil Conservation metric scores over time, you must recalculate all prior years data.
- As Version 4.0 impacts both the Fieldprint Calculator and the Fieldprint API, farmers accessing Field to Market's sustainability measurement through Qualified Data Management Partners (QDMPs) should expect the same general Platform changes. QDMPs are required to release updates to their integrations per Field to Market's QDMP Data Management License Agreement. However, QDMP integrations will be staggered and occur after the Fieldprint Calculator release, between July and September 2021.



Appendix A: Farmer Guidance for Fieldprint Platform 4.0

The following provides farmers with information around how Version 4.0 may impact use of the Calculator. For each of the common user activities, the table provides you with information on what to expect and applicable guidance.

Usage Scenario	What to Expect	Applicable Guidance
Adding new crop year in Version 4.0	<ul style="list-style-type: none"> New and modified data input requirements related to water quality. 	<ul style="list-style-type: none"> Review and be prepared for new data input requirements.
	<ul style="list-style-type: none"> Water quality metric results comprised of four components (loss pathways) with results on the Spidergram depicting how many of the four loss pathways have been mitigated. 	<ul style="list-style-type: none"> Anticipate new presentation of Water Quality metric results.
	<ul style="list-style-type: none"> Enforcement of Crop Calibration Mode for Wind Erosion Model. 	<ul style="list-style-type: none"> Expect more accurately modeled wind erosion results under certain conditions. Anticipate potentially longer computation times when generating a Fieldprint Analysis.
Editing a crop year entered in the Platform prior to Version 4.0 release.	<ul style="list-style-type: none"> Even if previously generated and set to finalized, crop years entered prior to release will be set to provisional. The new data input requirements will be set to default values for each crop year. 	<ul style="list-style-type: none"> It is recommended that users review each of the new or modified inputs prior to saving and recalculating the data. Upon release, the new and modified data inputs added for STEP will be set to default values (See Appendix A). Users can choose to leave default values and then recalculate the data at the crop year level or through a bulk export. ** However, the defaults lead to a worst-case or least favorable water quality metric result. If the data is included in a continuous improvement project, recalculation may be required. Specifically, projects focusing on water quality may not be able to utilize data calculated using default values.
	<ul style="list-style-type: none"> Crop year water quality metric results previously calculated and reported using WQI will be recalculated and reported using STEP. 	<ul style="list-style-type: none"> Anticipate revised water quality metric results. Any previous crop year comparisons should be revised accordingly.



Usage Scenario	What to Expect	Applicable Guidance
Editing a crop year entered in the Platform prior to Version 4.0 release (<i>continued</i>)	<ul style="list-style-type: none"> Crop year Soil Conservation and Soil Carbon year metric results may change slightly due to enforcing WEPS calibration mode. 	<ul style="list-style-type: none"> Anticipate revised Soil Conservation and Soil Carbon metric results. Any previous crop year comparisons should be revised accordingly.
Comparing Individual Grower Data Across Years	<ul style="list-style-type: none"> The release of Version 4.0 introduces metric and metric results data compatibility considerations. Data generated on different Platform releases cannot be compared or used together in analysis. 	<ul style="list-style-type: none"> Prior to any analysis, ensure both crop year data has been calculated on the most recent version of the Platform. (For example, comparing results from a 2019 non-irrigated corn crop year against a 2021 non-irrigated crop year on the same field.)
Participation in Continuous Improvement Projects	<ul style="list-style-type: none"> For Continuous Improvement Projects in which you are enrolled and have crop year data associated, Project Administrators may require crop year data to be updated and recalculated for inclusion in Project reporting, benchmarks and/or claims. 	<ul style="list-style-type: none"> Anticipate communication from Project Administrator providing guidance on recalculation of data. There are two available options: <ol style="list-style-type: none"> First, users can update crop year data either at the individual crop year level or in bulk through the Data Export feature. However, the Project Administrator will confirm if data should be updated or recalculated with defaults for modified and new data inputs. Second, the Project Administrator may request permission to recalculate your data in bulk using defaults for modified and new data inputs. In this case, no action is required on your part. However, users should recognize that crop year data will be updated on your behalf.



Usage Scenario	What to Expect	Applicable Guidance
Using COMET Planner in the Fieldprint Calculator	<ul style="list-style-type: none"> USDA NRCS COMET Planner Scenario Tool will be added to the Calculator as an optional tool. COMET Planner was developed by NRCS and Colorado State University as a meta-model that approximates results of the COMET-Farm tool for individual fields. 	<ul style="list-style-type: none"> The COMET Planner tool is optional and offers farmers and project sponsors a resource to easily and quickly estimate the potential for soil carbon change in response to a recent or planned management change. Farmers can also explore “what if” scenarios to see the potential impact of a change in practices on Soil Carbon in their field.

Want to learn more about the Fieldprint Platform?

- Try out the Calculator at <https://calculator.fieldtomarket.org>
- Learn more about Field to Market and our sustainability metrics at <https://fieldtomarket.org/our-programs/sustainability-metrics/>
- Learn more about our Continuous Improvement Accelerator at <https://fieldtomarket.org/continuous-improvement-accelerator/>
- If you would like to get in touch with Field to Market, email us at support@fieldtomarket.org