



SSCM Projection Tool v18.0

User Guide

Tool and User Guide developed by the Higher Education Coordinating Commission, University Budget & Finance Office.

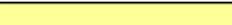
Overview:

The SSCM Projection Tool allows estimation of Student Success & Completion Model allocations by institution for up to eight fiscal years (four biennia). The tool is heavily dependent upon estimated input values, such as Public University Support Fund appropriations and institutional performance relative to other institutions. It is a work in progress and will be updated periodically to fix errors or add functionality.

This guide will address the tool's structure, the inputs required to make a projection, and projection outputs.

Please contact Barbara Russell (Barbara.Russell@state.or.us, 503.947.2440) with questions or functionality/feature requests.

Structure:

The tool consists of 86 tabs in a single Excel file. The tabs are color-coded by type: **green for data input tabs**, **orange for calculation tabs**, and **yellow for output tabs**. Some cells within the tabs are editable by the user as part of the parameter-entry process. **Cells marked with this pale-yellow color  may be edited by the user.**

There are 11 data inputs tabs within the tool and two tabs that collect/display outputs of the tool's calculations. The remaining 72 tabs are used for calculations and do not require user interaction.

Data Tabs (green)

Eight of the data input tabs are for the user to enter institutional performance information, including degree production data, student credit hour data, student population data, and dual credit data. There are two tabs for OSU (OSU and OSU-CC) and one tab for each of the remaining six public institutions. Data for all fiscal years of the projection is entered on the same tab.

There are three other data input tabs: Global Model Settings, Cost Weighting, and Data Validation. These data tabs provide inputs or validation for the calculation tabs.

Output Tabs (yellow)

The three yellow output tabs report the results of the tool's calculations. The "Summary" tab gives a succinct overview of total allocation by school by year (with biennial totals) through 2023. The "Collection" tab pulls the data from each calculation tab, totals it, and then applies any required Stop Loss or Stop Gain adjustments. The "Mission Differentiation Detail" tab is menu-driven and returns the Mission Differentiation values for a given year by institution and by line item.

Calculation Tabs (orange)

The remaining tabs each represent calculations for an individual fiscal year for each of the seven public institutions (eight tabs per institution). OSU’s calculations are broken down into three sub-units, each with eight tabs: “OSU” is the main Corvallis campus, “OSUCC” is the Cascades Campus, and “OSUSYS” is the total of the Corvallis and Cascades campuses. The calculation tabs do not require inputs or interaction from the user. They do, however, present an opportunity for the user to review the projection calculations in detail.

To summarize:

Data Tabs		
Global Model Settings	Green	Includes parameters included on Dashboard of SSCM Model file and other non-institution-specific projection parameters like inflation and PUSF appropriation.
Cost Weighting	Green	Calculates existing cost weights for SCH and degrees based on RAM weighting, allows user to enter alternative cost weight values that may vary across fiscal years.
Data Validation	Green	Summarizes and allows for simple comparison of non-transfer degree data, transfer degree data, student population data, student credit hour completions, and dual credit hours.
EOU Data	Green	Contains performance data for EOU for all fiscal years of the projection.
OIT Data	Green	Contains performance data for OIT for all fiscal years of the projection.
OSU Data	Green	Contains performance data for OSU (Corvallis) for all fiscal years of the projection.
OSUCC Data	Green	Contains performance data for OSU (Cascades) for all fiscal years of the projection.
PSU Data	Green	Contains performance data for PSU for all fiscal years of the projection.
SOU Data	Green	Contains performance data for SOU for all fiscal years of the projection.
UO Data	Green	Contains performance data for UO for all fiscal years of the projection.
WOU Data	Green	Contains performance data for WOU for all fiscal years of the projection.

Output Tabs		
Summary	Yellow	Contains summary allocation levels by school by year (and by biennium) through 2025.
Collection	Yellow	Gathers allocation information calculated in other tabs of the model, performs Stop Loss & Stop Gain calculations, if any.
Mission Differentiation Detail	Yellow	Through a menu, produces a table displaying Mission Differentiation by budget line item by year, and produces a parallel table showing the difference from that Mission Differentiation value of the prior year.

Calculation Tabs		
Example: 2018 EOU Calculations	Orange	Performs projection calculations, does not require user interaction.

Global Model Settings Tab:

The Global Model Settings tab allows the user to define calculation parameters for each year included in the projection. The following parameters are available on this tab:

Parameter	Description
PUSF	Annual PUSF appropriation
SCH %	% of PUSF after MD is subtracted off that is dedicated for SCH funding
Outcomes %	% of PUSF after MD is subtracted off that is dedicated for OBF funding
Stop Loss	Minimum % change from prior year allocation allowed by model calculations, to disengage, set to an extremely low value (-9999999% for example)
Stop Gain	Maximum % change from prior year allocation allowed by model calculations, to disengage, set to an extremely high value (9999999% for example)
Baccalaureate Degrees	Relative weight in the model calculation for BA/BS degrees.
Masters Degrees	Relative weight in the model calculation for Masters degrees
Doctoral Degrees	Relative weight in the model calculation for PhD degrees

Professional Degrees	Relative weight in the model calculation for Professional degrees
Graduate Certificates	Relative weight in the model calculation for Graduate Certificates
Transfer BA/BS degrees (% of Baccalaureate weight)	Value of BA/BS degrees earned by CC transfer students relative to the same degree earned by a non-transfer graduate.
Student Populations	Additive "bonus" allocation points for graduates representing 1 or more targeted student population groups.
STEM	Premium for degrees earned in STEM CIP codes (120% = 20% premium)
Bilingual Education	Premium for graduates that earn Bilingual Education designation (120% = 20% premium)
Health	Premium for degrees earned in Health-related CIP codes (120% = 20% premium)
Dual Credit	\$/credit hour for dual credit programs
Annual Inflation	CPI-U for Portland or expected future inflation value
Area of Study Bonus	Table allows CIP codes to be designated as STEM, Bilingual Education, or Health fields, triggering the appropriate premium in the tool's calculations.

Additional Global Model Setting Notes:

Inflation

Cells C45:C59 allow the user to input expected inflation for the years covered by the projection. This inflation figure is applied to Mission Differentiation items during the allocation calculation for all years in which the PUSF is increasing by at least the rate of inflation.

Area of Study Bonus

Rows 58-101 consist of an Area of Study table that allows the user to input and vary the bonus awarded to completions in specific CIP codes, including STEM, Health, and Bilingual Education fields. To assign an Area of Study bonus to a CIP code, simply type STEM, Health, or Bilingual Education in the row corresponding to the desired CIP code. Note that the user may choose to add the designation to one or more years included in the projection.

Cost Weighting Tab:

This tab allows the user to define the cost weighting for student credit hours and degrees for each of the fiscal years included in the projection. It is pre-loaded with the cost weight structure from the RAM. The cost weights may vary by fiscal year. Rows 1-65 are used to translate the RAM cost weight into the

values for FY16. Rows 69-117 allow the user to overwrite these values for student credit hours only. Rows 120-169 convert the student credit hour weights into degree weights. The user may overwrite the calculated degree weights if a different cost weighting scheme is desired for student credit hours and degrees. For degree weighting, there are two groups of values for each fiscal year: Preliminary Weight and Adjusted Weight. The Adjusted Weight is a re-indexing of the Preliminary Weight based on the lowest degree value in the Preliminary Weight section. It is used only to simplify math further down the calculation chain. The user should adjust the Preliminary Weight sections only and allow the spreadsheet to complete the indexing in the Adjusted Weight section.

Rows 171-219 simply re-state the information in the Adjusted Weight section to allow for easier lookup formulas in other areas of the Projection Tool and should not be modified by the user. Rows 221:268 represent the final adjustment to the cost weights and include any Area of Study bonuses applied to specific CIP codes. A summary of those bonuses is presented in rows 273:320. The values in these rows are derived from the "Global Model Settings" tab and should not be altered by the user on this tab.

Collection Tab:

The collection tab summarizes information from the tool's numerous calculation tabs. Scrolling horizontally represents moving forward in the projection timeline.

OBF and SCH allocations are determined by a point system (called allocation points). Each credit hour or each degree is worth a specific value in allocation points based on cost weighting structure, area of study, degree or course level, transfer/non-transfer status, and the population characteristics of the student. It is important to note that the value of 1.0 allocation points varies according to the number of total allocation points earned by all institutions. Once the tool has calculated the total allocation points for a specific fiscal year, it divides that number into the total PUSF dollars segmented for that purpose. For example, if \$2,000 is available for student credit hour funding from the PUSF and all institutions collectively earned 2,000 allocation points, then each allocation point is worth \$1 in student credit hour funding. If, however, 4,000 allocation points are earned across all institutions, the value of 1.0 SCH allocation point is 50 cents.

Rows 4:19 of the tab represent the OBF and SCH allocation points earned by each institution in the each year of the projection. Several sub-categories are presented to allow the user to see sub-totals for different point-earning items (Example: Masters Degrees or Area of Study bonuses). Rows 21:36 convert these allocation points into a corresponding percentage of all earned allocation points for either OBF or SCH activities. Rows 38:53 translate these percentages into the appropriate dollar amount of the allocation. **Please note that these dollar amounts are preliminary at this stage of the calculation and may be adjusted by the Stop Loss and Stop Gain functions.**

Rows 57:72 re-state the preliminary allocation for presentation purposes only. Rows 73:77 pull in data from the Mission Differentiation calculations. Row 79 is the total of the preliminary OBF, SCH, and MD allocations. It is compared to Row 78 (prior year allocation) to create the percent change values in row 80. This percent change is what the Stop Loss and Stop Gain functions examine. Rows 78:93 contain the

information and calculations needed to complete the Stop Loss/Stop Gain functions (if any are activated). Row 88 is the post Stop Loss/Stop Gain percent change from prior year.

Row 101 shows the change in allocation, if any, due to Stop Loss and Stop Gain operations. Row 110 and Row 111 are special items intended to only be present for FY16 (Shared Services) and FY16 & FY 17 (HB 5101 Tuition Buy Down). They are allocated separately from the SSCM model and are thus excluded from any Stop Loss or Stop Gain calculations. Row 112 and 113 are the values and percent change represented by the final allocation.

Please note that both OSU campuses are combined into a single column for all Stop Loss and Stop Gain computations.

Rows 116-17 show actual or projected PUSF distributions to the universities. These values will match closely to the SSCM allocation calculation, but may be very slightly adjusted for rounding. FY16 and FY17 actual distributions are preloaded in the appropriate cells for projection tool v17.0. Subsequent fiscal years are projections only—actual rounding adjustments may vary from what is displayed.

Institutional Data Tabs:

These tabs contain institution-specific data that drive the allocation calculations for all years of the projection. Most projections are driven by trailing three-year averages of data.

The institutional data tab contains an important feature: Using the chart at the top, a user may adjust specific data categories by a percentage change to create data for projections years. For example, if an institution wishes to assume that its 2019 performance will be 3% better in a data category than its 2018 showing, it can make this data adjustment very quickly and easily using the top table on the tab.

If, however, an institution wishes to be more precise, the data values may be typed over without damaging the calculation infrastructure of the tool. For example, if an institution believes it will generate 107 BA degrees in CIP 45 in 2017, it can type over the contents of the associate cells to make the value 107. PLEASE CONSIDER CHANGING THE COLOR OF CELLS IF YOU HARD CODE VALUES AS A REMINDER THAT FUTURE BULK CHANGES USING THE TABLE AT THE TOP OF THE TAB WILL NOT APPLY TO THOSE HARD CODED CELLS.

Institution & Year Specific Calculation Tabs:

These tabs perform the calculations that are reported on the Collection tab. Please browse one of the tabs to get familiar with the information each one contains, as the information may be valuable if an institution wishes to develop its own customized analytics tab(s).

Pivot Table Tabs:

Three pivot tables included with the model to allow the user to easily and quickly sort, search and summarize data from pertinent data and calculation tabs. Following is a list of these pivot tables and the related data source tabs:

Pivot Table	Data Source
Data Pivot Table	Institutional Data Tabs
Calculations Pivot Table	Institutional Calculations by Year tabs
Funding Pivot Table	Collection Tab