1. Assessment information collected
During these two academic years, we collected data using two standardized direct assessment mechanisms, and we also tracked the time to graduation. Assessment information is reported for 6 MS EQS (now WES) students that graduated in this two year period.

1) Comprehensive exam: 6/6 pass (average grade for 3 students: A-)
2) Graduate committee Evaluation results (1-10 scale):
   a. Knowledge of fundamentals: 9.3
   b. Technical rigor: 8.5
   c. Oral communication: 9.2
   d. Scientific/professional writing: 9.2
3) Time to Graduation: Average for all students within this two year period was: 2.58 years (6 students).

2. Conclusions drawn from the information summarized above
Based on the above assessment scores, overall the student performance was very good for this last two-year cycle. Scores showed that technical rigor was weakly rated and will be a focus for improvement and will be carefully watched for the next assessment cycle.

4/6 students graduated in 2 years, but couple of students were either already working students, or got jobs before graduation and thus took 3-4 years to graduate, pushing the average to 2.6 years. Comprehensive exam within the EQS program (now WES) was not uniformly conducted and thus only 3 students had score reports, though all students passed the comprehensive exam.

3. Curricular changes resulting from conclusions drawn above
The entire EQS (Environmental Quality Science) program has undergone a major overhaul recently in Spring 2016, which included a name change to Water and Environmental Science (WES). The program typically caters to students from science background who wish to go for graduate studies in environmental/water disciplines
within the overall umbrella of civil and environmental engineering. Specifically, the new WES degree has been consolidated to retain two environmental science tracks (‘environmental contaminants’ and ‘water supply and waste treatment’), include the ESM (‘environmental science and management’) track and a new ‘hydrology’ track. We believe these structural changes to the WES program will make it a stronger program in the future. Especially the new ‘hydrology’ track would be useful for many students who do research in the WERC (water and environmental research center) but needed to enroll in the interdisciplinary degree for the lack of opportunity within the former EQS program.

To address the indicated weakness (though only with data from 6 students) in the area of ‘technical rigor’, a written comprehensive exam is being planned for all the tracks within the WES program, which shall be uniformly administered via a written examination.

4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting

The analysis of SLOA results for MS WES for the current reporting cycle were discussed at the Civil Engineering department meeting on April 21st, 2016, with 10 faculty members present (Leroy Hulsey, Srijan Aggarwal, Nathan Belz, Il-Sang Ahn, Silke Schiewer, Paul Perreault, Robert Perkins, Yuri Shur, Horacio Toniolo and Jenny Liu).

The programmatic and structural change from EQS to WES program has been nearly a two-semester exercise spanning Fall 2015 and Spring 2016 semesters, and involved many discussions among the Civil Engineering faculty members during and beyond the weekly department meetings. Specifically, Dr. Silke Schiewer and Dr. Sveta Stuefer led the program changes to create the new MS WES program.