



**TO:** Elizabeth A. Pauli, City Manager  
**FROM:** Michael P. Slevin III, P.E., Environmental Services Director  
Eric Johnson, P.E., Interim Environmental Services Division Manager  
**COPY:** Infrastructure, Planning, and Sustainability Committee  
**PRESENTER:** Jessica Knickerbocker, P.E., Principal Engineer, Environmental Programs  
John D. Stark, Ph.D., Director, Washington Stormwater Center  
Matt Lonsdale, Science Teacher, iDEA School  
**SUBJECT:** Permeable Pavement Project at the iDEA School  
**DATE:** February 1, 2019

**PRESENTATION TYPE:**

Informational Briefing

**SUMMARY:**

Environmental Services, Science and Engineering Division, Jessica Knickerbocker will give a presentation to the Infrastructure, Planning, and Sustainability Committee on the permeable pavement project at the School of Industrial Design, Engineering and Art (iDEA). Jessica will demonstrate how the City is leading efforts to advance the permeable pavement industry by partnering with leading experts in Washington State, across the country, and China. John Stark will describe Washington State University's efforts developing the pavement mix designs, testing of the pavement, and water quality monitoring. Matt Lonsdale will provide an overview of student involvement through the iDEA School's stormwater course inspired by this project.

**BACKGROUND:**

The City received an EPA Puget Sound National Estuary Program grant to field test new permeable pavement mix designs and material testing procedures. This project intends to further durability, enhance standards, and increase confidence in permeable pavements. Approximately 20,000 square feet of permeable pavement was constructed with various mixes at the iDEA school.

Project partner Washington State University was awarded funding from The Boeing Company to demonstrate water quality benefits of the permeable pavements. With these funds a stormwater capture system and bioretention facilities was constructed on site to allow for the water quality monitoring.

**ISSUE:**

The purpose of this project is to further study stormwater treatment and durability of permeable pavements. Currently the leading edge of permeable pavement technologies include mixes incorporating Kevlar fibers, carbon composite fibers, and recycled asphalt shingles. This project is testing each of these mix designs. The project site and partnership with Washington State University, Orcas Love Raingardens, The Boeing Company, Washington Green Schools, and the Tacoma School District allow learning to extend to future engineering students, while increasing environmental stewardship through student engagement.

**ALTERNATIVES:**

This is an information briefing only. There are no alternatives presented.

**FISCAL IMPACT:**

This is an information briefing only. There is no fiscal impact.

**RECOMMENDATION:**

Identify ways to continue to engage and collaborate with the state, local universities, the school district, and other entities to support healthy neighborhoods, and a thriving Puget Sound to leave a better Tacoma for all.