

Taku Lake Rain Garden



Location: Taku Lake Park, E 76th Ave
(Go west on 76th from Seward Hwy to the end)
Completed: June 2007
Size: 1,000sqft
Landscaper: Seacoast Construction



Taku Lake Rain Garden
Construction: June 2007



Taku Lake Rain Garden
Planting: June 2007



2007



2008



2009



Taku Lake Rain Garden
Maintenance: June 2009



Russian Jack Springs Park – Low Impact Development Pilot Project

Project Description. The Russian Jack Spring Park (RJSP) project is located on the northeast side of Anchorage, near the intersection of Pine Street and Debar Road. This project was a joint effort between the Municipality of Anchorage (MOA) Parks and Recreation Department (Parks) and the MOA Project Management and Engineering, Watershed Management Services group. The purpose of the project was to reconstruct the existing RJSP parking lot in order to provide improved parking and pedestrian facilities for park users. The RJSP parking lot is used in the summer months for the softball fields located north and south of the parking lot. It is also used year-round for access to the park's popular trail system. The improvements included demolition of the park's existing tennis courts, replacing existing gravel parking with asphalt parking, providing pedestrian trails around the parking area, and visually enhancing the park with new landscaping features.

LID Features. The LID features of the project included construction of porous asphalt pavement and installation of a sub-surface infiltration gallery. Stormwater runoff from the parking lot was completely contained on-site with no discharge to surface waters. The porous asphalt and associated sub-grade was designed to store and infiltrate events up to the 10-year, 24-hour rainfall event. Most sections of porous asphalt were installed with a perforated conveyance pipe at the upper portion of the subgrade. During larger events, if the asphalt subgrade fills, these perforated pipes will direct water to the nearby subsurface infiltration gallery. Stormwater runoff from portions of non-porous asphalt is also directed to the subsurface infiltration gallery. Together, these facilities are designed to accommodate events up to the 100-year, 24-hour event.

This parking lot provided an unique opportunity to try porous asphalt as a pilot project because only a portion of the parking lot is used during winter months. Through coordination with Parks maintenance, the porous asphalt was strategically placed in locations that are not anticipated to require snow removal or sanding. The asphalt will be monitored over time to determine how it performs in Anchorage's cold climate.

Monitoring Plan. Construction of this project was completed at the end of the 2012 construction season. The performance of both the porous asphalt and the subsurface infiltration gallery will be monitored starting in the summer of 2013. The monitoring will include installation of a rain gauge at the site and installation of a pressure transducer in a manhole located immediate upstream of the subsurface infiltration facility. Monitoring wells were installed in the porous asphalt subgrade during project construction. By tracking the amount of rainfall that occurs at the site and checking water levels in the porous asphalt during significant rainfall events, the performance of the porous asphalt can be evaluated. By converting pressure readings from the pressure transducer to flow rates at the manhole upstream of the infiltration gallery, we can compare measured runoff hydrographs to synthetic runoff hydrographs. The subsurface infiltration gallery was installed with inspection ports that will be used to monitor water levels and performance of that facility during and following significant rainfall events.