

**A detailed narrative of the operations that will occur on site.** *The site will serve as an expansion of the existing Klein Water Treatment Facility (WTF) which is owned and operated by the South Adams County Water and Sanitation District (SACWSD). SACWSD conducted an alternatives evaluation in August of 2019 that included a desk top evaluation of IX and full-scale characterization of granular activated carbon (GAC) treatment for the removal of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). Subsequently, continued GAC optimization was performed along with a pilot scale IX operation from January 2019 through May 2020 to treat a combined PFAS/PFOA of 160 parts per trillion (ppt) down to goals of 35 ppt and non-detect.*

*From the pilot results, and the subsequent benefit-cost analysis conducted, IX was selected as the best overall long-term option for the removal of perfluorinated compounds. Additionally, the removal of 1,4 Dioxane was also evaluated. UVAOP (using peroxide and chlorine) were evaluated and implementation with peroxide was identified as the optimal solution, though this facility will be designed and constructed at a later time.*

*SACWSD currently utilizes a GAC treatment process at their Klein WTF. To consistently meet current satisfactory levels, SACWSD blends finished water with a limited amount of contracted supply. While this method of operations has resulted in current monitored PFAS levels that are satisfactory to SACWSD, the operations are costly and inefficient. Additionally, this method is an interim option as SACWSD grows into the full use of their long-term supplies. Because of this, the design and construction of IX treatment system is the most efficient, cost effective, and sustainable way for SACWSD to treat for PFAS in their source water.*

- **Hours and days of operation.** *These facilities provide potable drinking water for the citizens of Commerce City and are operated 24-hours a day, 7 days a week, 365 days per year. The majority of the staff work a normal 40-hour work week Monday through Friday, however there are a minimal number of staff on-site on weekends and nights.*
- **Number of employees.** *Currently there are 22 individuals working at the Klein/EWSF facility. The new IX facility is anticipated to require an additional 3 full time employees (FTEs) to operate and maintain the facility. Therefore, there would be a total of 25 individuals working out of the Klein water treatment campus when the new IX facility is constructed.*
- **Number of parking spaces required and provided.** *The current facility has parking spaces in excess of the current staff level of 22 employees. There are currently 49 parking spaces including 5 handicapped designated spaces. The proposed IX facility will be adding 6 additional parking spaces for additional staff*
- **Average daily peak trips generated.** *The addition of the new IX facility will not greatly increase number of vehicles and deliveries. There may be an addition of 3 more employee vehicles in the parking lot, and the number of deliveries of water treatment chemicals and supplies may increase slightly (potentially 1 more chemical delivery per month). Deliveries vary seasonally with the demand for treated water increasing during the summer. Currently, deliveries are approximately 3 deliveries per day during the May – August and 3 deliveries per week from September through April.*
- **Type of equipment or processes that are used.** *The new treatment facility will utilize ion exchange (IX) technology to treat PFAS from SACWSD’s source water.*
- **The description and process for storing or handling any hazardous materials.** *No hazardous materials will be stored or used on-site.*
- **A list of any regulating agencies with inspection information.** *CDPHE*
- **Any other relevant information.** *N/A*