A Water Efficiency Case Study – Intel Corporation's Ocotillo Campus

Intel Corporation's (Intel) commitment to Environmental Excellence and Leadership has been the cornerstone in creating and developing a leading edge industrial water efficiency and conservation strategy. Intel's Ocotillo Campus is a prime example of putting this commitment into practice, by establishing a water efficiency program that **conserves approximately 5.2 million gallons of water each day**.

Arizona presents unique water use challenges due to its hot, arid climate and fast growing metropolitan areas. Intel Ocotillo personnel have formed a strong partnership with the City of Chandler to use innovative technologies to achieve aggressive water reuse results. Three initiatives form the foundation of Intel Ocotillo's comprehensive water efficiency strategy. These include the Chandler Reverse Osmosis (RO) Recharge Facility, the Publicly Owned Treatment Works (POTW) effluent reuse program, and internal water reuse projects. The following provides more details on each:

1. **Chandler RO Recharge Facility** - Intel funded and spearheaded an advanced reverse osmosis water treatment facility (in partnership with the City of Chandler) to treat process wastewater from its semiconductor manufacturing or "Fab" plants at its Intel Ocotillo Campus. This process wastewater is treated to drinking water standards and returned to the underground aquifer to replenish the groundwater supply. This highly efficient process recovers, treats and returns a portion of Intel's rinse waters to the aquifer. Through the implementation of this key strategy, Intel and the City of Chandler have been able to return more than **3.5 billion gallons** of drinking quality water to the underground aquifer for eventual reuse since project inception.
2. **POTW Effluent Reuse Program** – Intel's Ocotillo campus takes back a portion of Chandler's treated effluent from its POTW for use in mechanical systems (i.e., scrubbers, cooling towers), landscape watering, and farm (forage crop) irrigation. In 2007 alone, Intel reused over **876 million gallons** of treated effluent/wastewater at its Ocotillo campus.
3. **Internal Water Reuse Projects** – Additional water efficiency measures were established at the Ocotillo site to support Intel Ocotillo's 2nd Fab, Fab 22. The Fab 22 Industrial Water Management (IWM) system consists of several innovative and advanced facilities systems that reclaim process and facilities wastewater. This reclaimed wastewater is supplied to facility equipment where most other industries would use fresh city water. These facilities systems allowed the planning and construction of the Fab 22 facility to proceed without impacting the local water infrastructure. In 2007, Intel's Ocotillo campus saved an additional **385 million gallons** of water using this water efficient IWM approach.

As a result of these three water savings initiatives, Intel reuses up to 75% of its water. As such, the City of Chandler and Intel are well prepared to operate as efficiently as possible in the current drought conditions affecting Arizona. Furthermore, replenishment of the underground aquifer will assure there is enough water to meet the future needs of all citizens and businesses for many more years - even if the drought continues.

Information on quarterly progress can be found on the Intel Ocotillo Environmental Excellence web page.