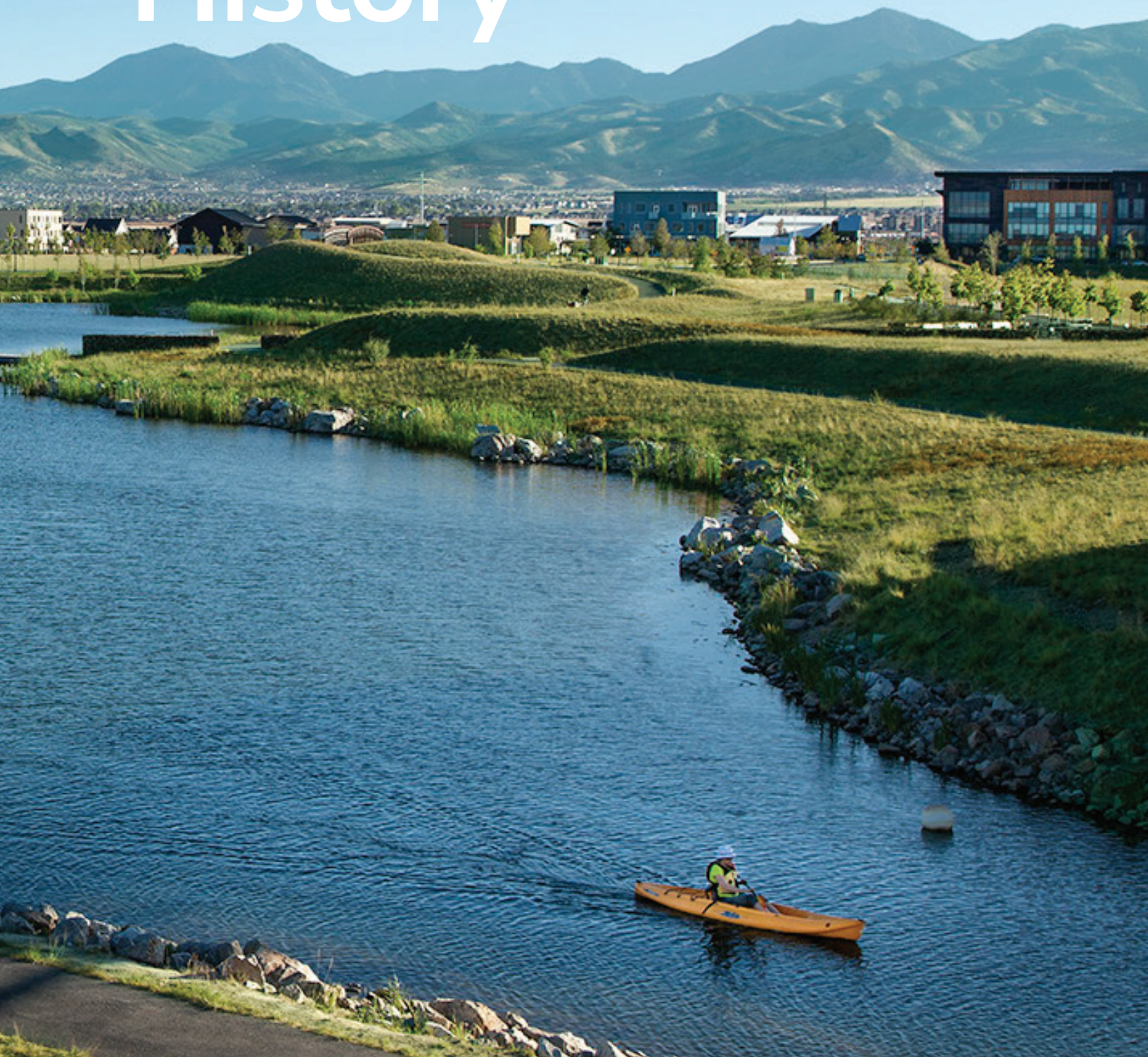


Daybreak's Environmental History





Introduction

We hope the information contained in this report will help you understand the environmental history of Daybreak and answer any questions you may have.



History

Utah's first mining district was born in the early 1860s when reports of significant mineral deposits in the Oquirrh Mountains were confirmed. Over the next 157 years, the industry went through enormous changes in prosperity and modernization. In 1989, one of the world's largest mining companies, Rio Tinto, purchased Kennecott Utah Copper (KUC). In 2001, Rio Tinto Kennecott began planning the Daybreak community as a sustainable use of post mining land and as a showcase of progressive thinking.

Soil Conditions at Daybreak

As the previous developers of Daybreak, Rio Tinto Kennecott worked closely with the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ) to develop site specific clean-up standards for unrestricted residential development. Rio Tinto Kennecott met, and in some cases, exceeded the EPA & UDEQ standards for soil conditions for development at Daybreak. A small part (around 13%) of the community sits on the former site of evaporation ponds used in conjunction with mining operations in Bingham Canyon. The following chronicles the development and removal of soil beneath those evaporation ponds.

- In 1936, Kennecott constructed evaporation ponds to store and evaporate mine water originating from the Bingham Canyon watershed.
- Over time, additional ponds were constructed to increase capacity, and the area became known as the South Jordan Evaporation Ponds (SJEP).
- The ponds were used for mine water until 1965 and for periodic storage of runoff water until 1987. SJEP use was discontinued in 1987.
- Studies in the early 1990s concluded that there were elevated levels of heavy metals in the soil where the evaporation ponds had been located. Rio Tinto Kennecott agreed to reclaim and remediate the SJEP area. The removal work was undertaken pursuant to an EPA Administrative Order on Consent.
- A massive clean-up operation began in 1994 involving the removal of pond sediment and six additional inches of underlying native soil. The material removed was permanently relocated to the Kennecott Bluewater Repository as part of the cleanup conducted consistent with the Comprehensive Environmental Response, Compensation, and Liability Act. At this time, some sediments, containing low concentrations of lead and arsenic but elevated sulfate concentrations, were consolidated onsite and capped with topsoil and re-vegetated. In 2001, the EPA issued a Record of Decision stating that the removal action adequately satisfied the remedial objectives and EPA determined that no further action was required. An Operation and Maintenance Plan (O&M Plan) was established to address further management of the consolidation site.
- In 2003 Rio Tinto Kennecott began removing the remaining sediments at the consolidation site under the guideline of the O&M Plan.
- In 2006, Rio Tinto Kennecott, the EPA and the UDEQ entered into an agreement solidifying the unrestricted residential and commercial use clean-up standards for the entire site.
- In early 2007, Rio Tinto Kennecott completed the consolidated pond sediment removal project. Then in December 2007, the project was endorsed by the EPA and UDEQ.
- In 2009, 2016 and 2022 additional cleanup to EPA residential standards have been completed in the Bastian Sink and feeder ditches.

Sustainability in the Landscape

Daybreak integrates sustainable landscape practices into the community in a number of ways.

- Smaller lot sizes.
- Use of native, drought-tolerant and waterwise planting materials and turf.
- Turf may not cover more than 60% of a homeowner's yard.
- Planter beds are required to surround fences, tree trunks and foundations.
- All builder and homeowner landscape plans are reviewed to make sure they comply with the community's landscape/waterwise guidelines.
- Use of an innovative secondary water collection and distribution system irrigates 80% of parks and open spaces.
- All secondary water is metered at the point of connection.
- 100% of storm water is retained on-site.
- Committed to planting 100,000 trees in the community, which will reduce urban heat island effect.

Water at Daybreak

Daybreak and other southwest valley residents get their culinary water from the Jordan Valley Water Conservancy District (JVWCD). More than 85% of the community's parks and open spaces are irrigated through the use of an innovative secondary water collection and distribution system. Secondary water (originating from Utah Lake) is piped in through existing pipelines and treated at a holding pond on the northern edge of the property. The water is then distributed for irrigation to parks and open spaces. In 2021, Daybreak conserved 32 million gallons of water by implementing technology and processes that carefully manage water consumption in common areas by adjusting to weather conditions in real-time. This prevents secondary watering during inclement weather and allows for tracking water usage.

Southwest Valley Groundwater

Groundwater in the southwest valley (including portions of South Jordan, West Jordan, Riverton and Herriman), has been impacted by historical mining operations in the Oquirrh Mountains. This water was found to contain higher than normal levels of sulfate. Sulfate (SO₄) occurs naturally in most groundwater, with higher levels associated with historic mining districts. As water moves through soil and rock formations that contain sulfate or sulfide bearing minerals, some of the sulfate dissolves into the groundwater. At high levels, sulfate can give water a bitter taste and can have a laxative effect. The presence of the groundwater plume, which is approximately 250 to 450 feet beneath Daybreak, does not constitute a health or safety risk, or concern to individuals who live, work, or recreate at Daybreak. Rio Tinto Kennecott is working with the UDEQ and the JVVCD and have implemented a clean-up plan that will have long-term environmental benefits.

Here are the facts:

- The groundwater plume is approximately 250 to 450 feet beneath the surface of Daybreak.
- No groundwater containing sulfate in quantities greater than the drinking water standards is extracted and directly supplied as drinking water to Daybreak or any other community in the southwest valley.
- In August 2004, Rio Tinto Kennecott signed an agreement to perform a groundwater clean-up in conjunction with the UDEQ and the JVVCD. The agreement outlines a plan to pump and treat groundwater.
- Two Reverse Osmosis (RO) plants have been built and treat the sulfate-contaminated water and provide drinking water to the JVVCD. The western RO plant operated by Rio Tinto Kennecott, also known as Bingham Canyon Water Treatment Plant located southeast of Copperton, began providing drinking water in June 2006. The eastern RO plant operated by JVVCD, located along 1300 West and 8200 South, has been in full operation since in the second quarter of 2012. The plant continues to treat groundwater extracted from wells located in the South Jordan area.
- The groundwater treatment project has a 40-year timeline that RioTinto Kennecott will be financing. At the end of this period, the size of the plumes will have decreased substantially.
- The two RO plants will provide at least 7,000-acre feet of clean water per year to the JVVCD.



Air Quality

Due to its unique topography and quickly growing population, Utah experiences a number of challenges in maintaining healthy air quality for its citizens, particularly in the more densely populated areas along the Wasatch Front. The Daybreak plan incorporates the following elements to help reduce carbon monoxide emissions from buildings and vehicles:

- Because Daybreak is designed as a “traditional neighborhood development” there is a reduction of vehicle miles traveled for daily needs because of a network of connected sidewalks and streets.
- The layout of amenities in Daybreak is based upon the 5-minute rule. This simple rule places parks, restaurants, shopping, schools, offices and light rail within easy walking or biking distance from home.
- Daybreak played a pivotal role in the development of the Utah Transit Authority’s TRAX red line, which connects Daybreak to the University of Utah.
- High performing LEED-certified buildings have been built in Daybreak. The Rio Tinto Regional Center was the first LEED Platinum-rated core and shell building in Utah.
- Balancing the jobs-to-housing ratio by bringing more employment centers close to where people live is a key tenet of the Daybreak master plan. Over the next several years, we’ll be focused on bringing more jobs to our urban core. This provides more people the opportunity to work closer to home, and combined with the convenient access to light rail, is poised to have a long term impact to our valley’s air quality by taking thousands of cars off the road every day.



Environmental Commitment for Today and the Future

Daybreak has been carefully planned to incorporate key social and environmental features in its design. To us, sustainability is the ability to work proactively, find common ground among different interests and create something that uplifts the entire community. Sustainability goes beyond environmental considerations and takes into account the economic and social implications of the decisions we make. It's the lens that lets us see farther down the road, bringing greater foresight to our planning and greater insight to our decision-making. It's the spark that ignites big ideas and solves problems at a whole new level. And in the end, it's just plain common sense.

- More than 1,000 acres of Daybreak has been planned as open space. This open space will be irrigated with secondary water and landscaped with native, drought-tolerant planting materials and a reduced amount of turf.
- At completion Daybreak will be home to 100,000 new trees.
- Every year Daybreak invites an estimated 4.5 million honey bees to live right here in the neighborhood to pollinate the flowers and trees. They also produce yummy raw honey that is sold at Biscotts Cafe.
- Our storm water management system has been designed to retain 100% of storm water onsite from a 100 year rain event in an effort to preserve precious groundwater resources.
- Daybreak has a vigorous dust control program for construction activities.
- Daybreak conducts noise and vibration monitoring to ensure that impacts from its construction activities are well-controlled.

Envision Utah awarded Daybreak with six Governor's Awards for Quality Growth recognizing sustainable development achievements at Daybreak.

- 2002 – Grand Achievement Award for Design and Planning.
- 2003 – Award of Merit for ecosystem approach to planting design, plant procurement and landscape maintenance.
- 2006 – Award for the West Bench Planning Summits in the Public Involvement category for the 2005 Council of Government Summits.
- 2008 Daybreak Village One Parks & Open Space*
Honor Award | Design Represents outstanding accomplishment in the profession of landscape architecture. American Society of Landscape Architects, Utah Chapter *as Design Workshop
- 2010 – Award for Daybreak Elementary and Community Center for innovative public/private partnership. Daybreak Elementary has Silver LEED certification and has geo-thermal heating, making it one of the Jordan Districts most energy-efficient schools.
- 2010 – Award for Daybreak Corporate Center/Rio Tinto Regional Center for earning the first LEED Platinum designation in Utah
- 2010 – Salt Lake County/ Daybreak: Crosswalk Collaboration Portal/Active Street Maps.
- 2011 – 2010 Community of the Year – Best in American Living
- 2011- Platinum Award for Suburban Smart Growth Award- Best in American Living
- 2015- ASLA Honor Award for Design- Brookside Park
- 2017- Top Selling Master-Planned Community
- 2018- Top Selling Master-Planned Community
- 2019-Master-Planned Community of the Year, PCBC
- 2019- Top Selling Master-Planned Community
- 2020- Top Selling Master-Planned Community
- 2020 The Watercourse at Daybreak
Honor Award | Analysis & Planning Represents outstanding accomplishment in the profession of landscape architecture. American Society of Landscape Architects, Utah Chapter
- 2020 Heights Park **Honor Award | General Design** Represents outstanding accomplishment in the profession of landscape architecture. American Society of Landscape Architects, Utah Chapter
- 2020 Ewok Park **Merit Award | General Design** Represents superior accomplishment in the profession of landscape architecture. American Society of Landscape Architects, Utah Chapter
- 2021 The Beach Club at SoDa Row
Merit Award | General Design Represents superior accomplishment in the profession of landscape architecture. American Society of Landscape Architects, Utah Chapter

Combined, these efforts and others will help ensure our natural resources will be available to future generations, and Utah will remain a healthy and desirable place to live.

Additional resources:

U.S. Environmental Protection Agency

www.epa.gov

Jordan Valley Water Conservancy District

www.jvwcd.org

ISO Environmental Certification

www.iso.org

Kennecott Utah Copper

www.kennecott.com

Utah Department of Environmental Quality

www.deq.utah.gov

Rio Tinto

www.riotinto.com

Daybreak Utah

www.daybreakutah.com

Larry H. Miller Real Estate

www.realestate.lhm.com