

## Utah and the World War II Home Front

### Introduction

The Beehive state, known for its scenic mountain and desert vistas and the predominance of The Church of Jesus Christ of Latter-day Saints (LDS), played a crucial role in the war effort. Utah was chosen for key military sites, such as iron processing plants and air corps training facilities, and for its central location that connected the materials and people of Utah to the West Coast. Tens of thousands of Utah workers repaired, maintained, and tested planes, vehicles, and weapons at various military installations across the Wasatch Front.

### Mobilization: Military and Industry

The federal government, through the Defense Plant Corporation, authorized \$311 million in new industrial facilities for Utah. This investment resulted in a 120% rise in manufacturing from 1943-1945 and the construction of large facilities. Out of the \$210 million spent on iron processing facilities, over 90% went to the construction of Geneva Steel Works.<sup>1</sup> The site of Orem was chosen due to its proximity to deposits of coal, iron ore, and limestone. Two different rail lines that converged at the plant site provided optimal transportation.<sup>2</sup>



*Men and women using mechanical loading to handle supplies at the Ogden Defense Depot. (Credit: Special Collections Department, Stewart Library, Weber State University, ID 98994)*

Salt Lake City became the epicenter of wartime activity in the state. The Salt Lake Ordnance Plant, consisting of 211 buildings that cost \$30 million to construct, made .30 and .50 caliber munitions.<sup>3</sup> Salt Lake City was also the site of the Utah Oil Refinery, which was one of only two plants in the nation that produced high-octane aviation fuel through the “neohexane process.” Fort Douglas in Salt Lake City was the first and last experience of the war for many servicemen. It functioned both as a reception center for new soldiers and a separation facility for those discharged after the war.<sup>4</sup> The repair shops at Fort Douglas oversaw the salvage and maintenance of military vehicles for all western states.<sup>5</sup>

Ogden, north of Salt Lake City, was home to several major defense facilities built or greatly expanded during the war, which challenged the city’s services and housing. The Utah General Depot (or the Ogden Defense Depot) was built on 3,000 acres of land near the Great Salt Lake. At the time of its completion, the Depot was the largest quartermaster depot in the country.<sup>6</sup> An older military installation,

<sup>1</sup> Leonard J. Arrington and George Jensen, *The Defense Industry of Utah* (Logan: Department of Economics, Utah State University, 1965), 13-14.

<sup>2</sup> Richard D. Poll, *Utah’s History* (Provo: Brigham Young University Press, 1978), 502

<sup>3</sup> Allan Kent Powell, *Utah History Encyclopedia* (Salt Lake City: University of Utah Press, 1994), 647; Thomas G. Alexander and Leonard J. Arrington, “Utah’s Small Arms Ammunition Plant during World War II,” *Pacific Historical Review* 34, no. 2 (1965): 186.

<sup>4</sup> Allan Kent Powell, *Utah Remembers World War II* (Logan: Utah State University Press, 1991), 111.

<sup>5</sup> Leonard J. Arrington and Thomas G. Alexander, “The U.S. Army Overlooks Salt Lake Valley: Fort Douglas 1862-1965,” *Utah Historical Quarterly* 33, no. 4 (1965): 345.

<sup>6</sup> Leonard J. Arrington and Thomas G. Alexander, “Supply Hub of the West: Defense Depot Ogden, 1941-1964,” *Utah Historical Quarterly* 32, no. 2 (1964): 100, 103.

the Ogden Arsenal, specialized in manufacturing and storing ammunition.<sup>7</sup> The Clearfield Naval Storehouse in Ogden was one of three inland naval supply depots in the United States.<sup>8</sup> Ogden was also the site of Hill Field, the first air base established in Utah. Initially, the base mainly repaired and maintained aircraft. In 1943, Hill Field began an overhaul production line for B-24 Liberator bombers, delivering one per day to the Army Air Corps. In anticipation of increased air traffic over the Rockies, the Civil Aeronautics Authority established an air traffic control center in Salt Lake City in 1940, and the Mormon Tabernacle Choir painted a large arrow on its roof directing pilots to the airport.<sup>9</sup>

The “wasteland” of the West Desert, with its arid climate and flat open spaces proved crucial for both the storage and testing of chemical weapons. The Army established a vast storage facility in Tooele, with 902 igloos for holding explosives and 31 large warehouses.<sup>10</sup> Nearby, the Army also constructed a top-secret storage facility in Rush Valley, the only one of its kind in the nation, for housing chemical warfare materials.<sup>11</sup> Comprising an area larger than the state of Rhode Island, the 850,000 acres of the Dugway Proving Grounds was used by the Chemical Warfare Service for the testing of toxic chemical weapons and biological agents. The desert lands also served as the training ground for several aerial bombing groups, including training for future atomic missions at Wendover Bombing Range. The range expanded during the war to become the nation’s largest military reserve, covering 3.5 million acres.<sup>12</sup>

The economic impact of WWII on Utah was also evident in the development of agriculture and mining. Farmers fared far better in Utah during the war than they had in the previous decade. Cash farm income nearly doubled, rising from \$44 million in 1938 to \$81 million in 1942, and over a million acres of farmland were added. During gasoline rationing, farmers were allowed higher quotas in order to fuel farm machinery.<sup>13</sup> Utah’s abundant mines provided copper, aluminum, silver, lead, uranium, limestone, and coal for everything from steel production to nuclear development.<sup>14</sup>

### **Mobilization: Changes for Workers**

The war brought 49,500 new jobs to Utah, a welcome development after the high unemployment rates of the Great Depression era. The Salt Lake Ordnance Plant created 10,000 permanent jobs, employing 7% of Utah’s workforce.<sup>15</sup> The Ogden Depot employed 7,672 civilians at its peak, the Ogden Arsenal employed nearly 6,000, and the Clearfield Depot had 7,642 employees on its rolls in 1944. By 1943, Hill Field was the state’s largest employer with 15,000 civilians and 6,000 military personnel.<sup>16</sup>

Labor shortages were prevalent across the state and were mostly filled by women and European POWs. Women’s employment in Utah more than doubled during the war, and by 1944, women

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<sup>7</sup> Thomas G. Alexander, “Ogden’s ‘Arsenal of Democracy’ 1920-1955,” *Utah Historical Quarterly* 33, no. 3 (1965).

<sup>8</sup> Leonard J. Arrington and Archer Lyman Durham, *Anchors Aweigh in Utah: The U.S. Naval Supply Depot at Clearfield, 1942-1962* (Salt Lake City: Utah State Historical Society, 1963).

<sup>9</sup> Roger D. Launius and Jessie L. Embry, “A Transforming Force: Military Aviation and Utah in World War II,” *Utah Historical Quarterly* 63, no. 3 (1995): 226, 237.

<sup>10</sup> Gerald D. Nash, *World War II and the West: Reshaping the Economy* (Lincoln: University of Nebraska Press, 1990), 5.

<sup>11</sup> Leonard J. Arrington and Thomas G. Alexander, “Sentinels on the Desert: The Dugway Proving Ground (1942-1963) and Deseret Chemical Depot (1942-1955),” *Utah Historical Quarterly* 32, no. 1 (1964): 37.

<sup>12</sup> Nash, *World War II and the West*, 5-6.

<sup>13</sup> *Ibid.*, xi. Jessie L. Embry, “Fighting the Good Fight: The Utah Home Front during World War II,” *Utah Historical Quarterly* 63, no. 3 (1995): 246.

<sup>14</sup> Thomas G. Alexander, “Generating Wealth from the Earth: 1847-2000,” in *From the Ground Up: A History of Mining in Utah*, ed. Colleen Whitley (Logan: Utah State University Press, 2006), 71.

<sup>15</sup> Alexander and Arrington, “Utah’s Small Arms Ammunition Plant during World War II,” 190.

<sup>16</sup> Poll, *Utah’s History*, 498-501. Alexander, “Utah War Industry during World War II,” 74.

composed more than a third of the workforce.<sup>17</sup> This was notable given LDS Church teachings that discouraged women from working. Women worked at all military bases, sometimes in occupations previously open only to men. For instance, the Ogden Defense Depot employed a large number of women as armed guards after they completed training in self-defense and firearms. The only sector of the workforce women did not gain entry into was mining, due to industry gender norms and prewar mining laws that restricted the employment of women.<sup>18</sup>

Labor shortages on the Utah homefront were also alleviated by the arrival of enemy prisoners of war. More than 8,000 German and 7,000 Italian POWs were held at eight POW camps located on military installations along the western slope of the Wasatch.<sup>19</sup> They performed numerous crucial tasks at Fort Douglas, Hill Field, Clearfield, and the Ogden Defense Depot. By 1945, the Depot housed nearly 5,000 POWs. Four temporary POW camps—established in Logan, Orem, Tremonton, and Salina—served Utah farmers greatly in need of agricultural workers.<sup>20</sup>

### **Discrimination and Fights for Equality**

Racial tensions pervaded the homefront in Utah. Historian Allan Kent Powell explains, “blacks and other minority groups experienced the same kinds of discrimination in housing and services as they did elsewhere in the United States.” While the African American population in Utah doubled during the war, civilian buildings and military bases in Utah were segregated. Hill Field operated segregated military police units, and Black women were relegated to the lowest paying jobs.<sup>21</sup>

The POW camp at Salina gained national recognition for the massacre of German POWs. Shortly after midnight on July 8, 1945, Private Bertucci climbed a guard tower and fired into the tents of sleeping prisoners with a browning machine gun. In total, nine Germans were murdered, and nineteen others were wounded. The nation read about the “Midnight Massacre” in major publications like TIME magazine. The German victims were buried with military honors at the Fort Douglas cemetery. The incident remains the largest massacre of POWs on American soil.<sup>22</sup>

Utah was also the location of Japanese incarceration and resettlement. The largest Japanese incarceration camp in Utah was the Central Utah Relocation Center at Topaz, which held nearly 10,000 Japanese Americans from the West Coast. Incarcerates worked as laborers in sugar beet fields and mined coal at the Dog Valley Mine.<sup>23</sup> The earliest site of Japanese relocation in the state was the Keetley agricultural settlement near Park City. 519 Japanese Americans voluntarily relocated to Keetley from California, where they experienced racist sentiments and violence from local residents. In Utah County, bullets were fired at Japanese families on two occasions, with one teenage girl being hit.<sup>24</sup>

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<sup>17</sup> Antonette Chambers Noble, “Utah’s Rosies: Women in the Utah War Industries during World War II,” *Utah Historical Quarterly* 59, no. 2 (1991): 126.

<sup>18</sup> Arrington and Alexander, “Supply Hub of the West” 104. Noble, “Utah’s Rosies,” 126.

<sup>19</sup> Allan Kent Powell, *Splinters of a Nation: German Prisoners of War in Utah* (Salt Lake City: University of Utah Press, 1989), 57.

<sup>20</sup> Arrington and Alexander, “Supply Hub of the West,” 106. Antonio Thompson, *Men in German Uniform: POWs in America during World War II* (Knoxville: University of Tennessee Press, 2010), 44.

<sup>21</sup> Poll, *Utah’s History*, 512. Powell, *Utah Remembers World War II*, 129.

<sup>22</sup> Powell, *Splinters of a Nation*, 232. “[Midnight Massacre](#),” *Time*, July 23, 1945. Christian Flanders, “[The P.O.W. Camp at Salina, Utah](#),” Intermountain Histories.

<sup>23</sup> Allan Kent Powell “Utah and World War II,” *Utah Historical Quarterly* 73 no. 2 (2005): 127

<sup>24</sup> Sandra C. Taylor, “Japanese Americans And Keetley Farms: Utah’s Relocation Colony” *Utah Historical Quarterly* 54, no. 4 (1986): 329, 333. Powell “Utah and World War II,” 126.

The atomic west also disproportionately disadvantaged the Indigenous groups that lived there. The advent of atomic weapons created a new and constant demand for uranium and vanadium, which was met by mines on the Colorado Plateau on land owned by the Navajo Nation. The Vanadium Corporation of America, which was contracted by the Defense Plant Corporation, did not pay the Navajo Nation for either uranium or vanadium until 1944.<sup>25</sup>

### **Life on the Home Front**

The LDS Church's identity as a global religion, with some 15,000 Mormons living in Nazi Germany, made it challenging to both proclaim peace and support American combat efforts. Eventually, the First Presidency of the LDS Church condemned Nazism in 1942, and the Church purchased over \$17 million in U.S. war bonds.<sup>26</sup> The influx of newcomers to Utah, and the housing scarcity this caused, was met with tension and suspicion from the local, historically isolationist LDS communities. Utah residents also faced hardships with rationing as sugar, rubber, gasoline, and metals were restricted. Roughly 550,000 Utahns registered for stamps. Clothing and textile rationing forced women to either wear slacks, which was often frowned upon at the time, or paint their legs.<sup>27</sup> Victory gardens proliferated and scrap drives, bond drives, and USO donations were sought after and promoted through local papers.

### **After the War**

Utah's population boomed during the 1940s as a direct result of the rapid construction of military bases. While the African American population deflated after wartime jobs ended, the Spanish speaking population permanently increased in size and diversity. Mining, agriculture, and industry all continued to thrive after the war, but brought about negative environmental impacts. Through the use of chemical and biological weapons, the federal government left long-lasting hazardous contamination on Utah farms and the Goshute Reservation. Moreover, the health risks of long exposures to uranium mining plagued the people of the Navajo Nation for subsequent decades.<sup>28</sup>

### **Places of World War II History**

- **Ogden City:** Utah's designated American WWII Heritage City included the Ogden Defense Depot, one of the largest military supply depots in the U.S. It was also a POW camp. Nearby was Hill Field, Utah's largest wartime employer and a vital maintenance and supply air base.
- **Dugway Proving Grounds:** During WWII, the military tested toxic chemical weapons on these grounds, including incendiary bombs on a government-constructed, full-scale village consisting of Japanese and German dwellings.
- **Central Utah Relocation Center (Topaz) Site:** Today a [National Historic Landmark](#), Topaz was one of ten large War Relocation Authority camps that incarcerated Japanese Americans and people of Japanese descent.

*By John Flynn, supervised by Dr. Matt Basso. Adapted by Dr. Nicole Martin, consulting historians with the National Park Service in partnership with the National Council on Public History.*

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<sup>25</sup> Peter H. Eichstaedt, *If You Poison Us: Uranium and Native Americans* (Santa Fe: Red Crane Books, 1994), 33.

<sup>26</sup> Joseph M. Dixon, "Mormons in the Third Reich: 1933-1945," *Dialogue: A Journal of Mormon Thought* 7, no. 1 (1972): 70. Embry, "Fighting the Good Fight," 261.

<sup>27</sup> Embry, "Fighting the Good Fight," 225, 247- 248.

<sup>28</sup> Poll, *Utah's History*, 510. Powell, *Utah History Encyclopedia*, 335.