

HISTORIC AMERICAN LANDSCAPES SURVEY

THE TUCSON PLANT MATERIALS CENTER

HALS NO. AZ-11

Location: The Tucson Plant Materials Center (TPMC) is located at 3241 North Romero Road, Tucson, Arizona, Pima County. The landscape encompasses a 45.88 acre site that includes administrative offices and plant nurseries situated in the southern quarter of the property, capped by agricultural fields to the north. The property is bounded by Interstate 10 (I-10) and the Union Pacific Railroad to the west and south, Romero Road to the east, and Prince Road to the north.

Latitude: 32.266308 Longitude: -111.003995 (Center of Headquarters Administration Building courtyard, Google Earth, Simple Cylindrical Projection, WGS84)

Significance: “From its beginning, the Plant Materials Program has sought superior plants and methods for using them in the war against past and evolving, natural resources degradation. It has changed over the years, always adjusting to meet evolving needs (Sharp 2013:7).”

The Tucson Plant Materials Center (TPMC) was established in direct response to Depression-era New Deal legislation enacted during the presidency of Franklin D. Roosevelt. While the Great Plains and Midwest were experiencing the devastating effects of the Dust Bowl, brought about in part by poor farming practices, the western United States was dealing with a related, yet unique set of circumstances. In Arizona for example, overgrazing and lack of regulations on public rangeland contributed to degradation and soil erosion. While much of the New Deal programs dealt with urban infrastructure and unemployment, an equally important aspect of these programs was support for rural communities.

The emphasis on supporting agrarian communities, considered by President Roosevelt to be the backbone of the country, was in direct relation to Roosevelt’s strong personal interest in the land and to ensure its proper stewardship (Degler 1970). His personal interests further manifested themselves in legislation and relief programs that focused on scientific research that would aid those engaged in rural commerce. One such outcome of these research programs was the Tucson Plant Materials Center, in Tucson, Arizona.

Historically, the southwestern United States (Arizona, Colorado, New Mexico and Utah) has been a ranching, lumber, mining and livestock region. Beginning in the mid-19th century, ranchers were allowed to graze sheep and cattle on open public rangeland with minimal regulation or intervention. Seemingly

unaware of (or unconcerned with) the potential problems brought about by overgrazing, thousands of acres of native grasslands were decimated with little opportunity for regeneration. Consequently, expanses of land exposed to wind and rain began to experience significant soil erosion without protective surface vegetation. The land could no longer support the numbers of animals needed for profitable returns.

In the early 1930s, the United States Department of Agriculture (USDA) responded to the growing national environmental crisis by creating 48 Soil Conservation Nurseries, later known as Plant Materials Centers, established to combat the country-wide issue of soil erosion. From the onset, the primary goal of these nurseries was to grow and distribute plants for the stabilization of soil on severely eroded/ing lands (NRCS 2014).

The workforce entrusted with the responsibility of building these “New Deal nurseries” was the Civilian Conservation Corps (CCC). The CCC, for example, built several of the original adobe Pueblo Revival style buildings at TPMC and their architectural style is characteristic of other building projects undertaken by the CCC in the greater Southwest. In 1997, these buildings and the property immediately surrounding them were listed in the National Register of Historic Places (NRHP).

Initially under the direction of horticulturist Franklin J. Crider, best known for his work with edible arid-land plants and livestock forage at the Boyce Thompson Arboretum (Erickson et al. 2012:2), Dr. Crider conducted thorough testing and oversaw the distribution of rangeland trees, shrubs, forbes, and grasses used to control soil erosion. Many grass varieties that are in commercial production in the U.S. today, for example, were grown out or increased at the TPMC (including many that are now considered invasive species).

Of the 48 nurseries established during this time, the Tucson Plant Materials Center was the 14th built and remains only one of four still in operation today. It also served historically as and continues to serve as the southwest region headquarters for USDA Plant Materials Centers. Unlike other New Deal-era relief projects, once the worst of the environmental drought had ended, the mission and work of the facility continued, and continues its legacy to the present day.

Description: The USDA Tucson Plant Materials Center is located on 45.88 (Navarre and Briggs 1996:(7)1) acres of cultivated and minimally developed land that continues to function as a research facility for the experimental development of

rehabilitative and beneficial plants. The parcel is triangular in shape with an eastern-gated entry located along Romero Road (Figure 1, Figure 2 and Figure 3). Land for the center is situated in the Santa Cruz floodplain with some portions of the property located less than half a mile from the river's eastern bank. In addition, the confluence of the Rillito and the Santa Cruz rivers is north of the site, providing the ideal setting for agricultural activities. Aside from few infrastructure improvements, the facility's purpose and role in rural American industry and environmental resource conservation has not changed throughout its operative years.

Originally totaling 60 acres, land for the center was acquired in 1934 from the University of Arizona (Crider 1934-35:67). The center was initially built to address environmental and economic degradation associated with the Dust Bowl. Over its occupational history, it has continued its mission towards the development and study of plants for the restoration of areas negatively affected by overgrazing and intensive farming practices.

Early financial support for Plant Materials Centers was created by enabling legislation associated with the New Deal. Most notable of these legislative initiatives concerning the Dust Bowl, and associated with Plant Materials Centers, was the creation of the U.S. Soil Erosion Service (SES) in 1935. The SES was later known as the Soil Conservation Service (SCS) (renamed Natural Resources Conservation Service [NRCS] in 1994). The SES appointed Hugh H. Bennett as its first director and Bennett immediately took action by implementing reconnaissance surveys documenting areas devastated by overgrazing (Navarre and Briggs 1996:(8)1). Based on these early surveys, the SES oversaw the construction of 48 plant materials centers around the United States (Sharp 2013). The Tucson Plant Materials Center (TPMC), under the direction of Dr. Franklin J. Crider, was tasked with overseeing the southwest region of the United States throughout the Sonoran, Mojave, and Chihuahuan deserts, with a focus on the cultivation of range grasses (Woodward and Osman 1992:6) (Figure 4).

Once the nursery and field operations were in place, the first plants were cultivated in June of 1934. The first plant types included native and exotic trees, shrubs, shrubby perennials, and grasses—all believed to hold value for erosion control and other economic uses (Crider 1934-35: 21). During the first year, 1,609 plant varieties were brought together as seeds, cuttings, and individual plants for propagation material. Native materials were collected by nursery staff throughout the southwest region. Exotic materials were also secured by exploration parties sent out by the SES to semi-arid regions including Western

Asia, South Africa, and Australia, and through collaborative exchanges between other research institutions and individuals (Crider 1934-35: 23).

A year after initial planting, the nursery stock inventory record of 30 June 1935 notes that 6,578,700 individual plants were in propagation (Crider 1934-35: 31). Archival plant records reveal that numerous beneficial plant species were cultivated at TPMC over its history, including: asparagus (*Asparagus officinalis*) (460,000), native to Western Asia and a widely cultivated vegetable crop; mormon tea (*Ephedra sinica*) (400,000), native to Western Asia with ethnobotanical uses; desert willow (*Chilopsis linearis*) (185,000), a soil stabilizer effective in erosion control; white mulberry (*Morus alba*) (223,000), native to China and used for erosion control and windbreaks; sheepbush (*Pentzia incana*) (300,000) grown for forage material; alkali sacaton (*Sporobolus airoides*) (2,000,000), native to western North America and used for soil stabilization and erosion control; and giant sacaton (*Sporobolus wrightii*) (2,000,000), native to western North America and used for soil stabilization, erosion control, and forage.

Today, the Center's research foci continues to include experimental plant species for erosion control but also concentrates on issues involving drought, pollinator conservation, water quality, wildlife habitat, mining reclamation, energy demands, and wildfire damage (NRCS 2014). The center works in partnership with conservation and development groups, federal and state agencies, and non-profit and private landowners to develop and improve planting technology to address today's natural resource issues (DOA 2008). The current plant palette remains similar to the center's original purpose, whereby it is dominated by grasses and forbes, but the foci has extended to include the cultivation of native species. As a result, the center's research relies less on introduced or exotic species, although they are still used in research projects. Some of the significant plants currently in production include: giant sacaton (*Sporobolus wrightii*), native to western North America and used for soil stabilization, erosion control, and forage; tobosagrass (*Pleuraphis mutica*), native to the southwestern United States and an important forage for horses and cattle and is used for erosion control; Indian blanket (*Gaillardia sp.*), native to North and South America an important pollinator species; and globe mallow (*Sphaeralcea sp.*), native to North and South America is also an important pollinator species. Although not intended for competitive distribution or for commercial sale, plants are researched, developed, grown out, and distributed to various groups for use on natural resources projects.

The TPMC Character Areas:

For the purposes of discussion, the landscape of the TPMC is partitioned into four character areas. Character areas include (1) the headquarters, (2) the nursery, (3) agricultural fields, and (4) linear features (Figure 5).

Character Area 1: The Headquarters

The headquarters cover three acres consisting of a complex of administrative buildings, ancillary structures—that either house equipment or store plant materials—and minimally landscaped grounds that surround the headquarters (Figure 7 and Figure 8). A series of sidewalks and a paved parking lot abuts the southern margins of the administrative buildings. The parking lot is accessed from a short driveway and extends west from Romero Road some 175 feet (Woodward and Osmon 1992:2).

The focal point of Character Area 1 is the 1930s-era administrative buildings. Both buildings are constructed of adobe sheathed with a smooth stucco finish and are characteristic examples of Pueblo Revival style architecture made popular during the latter half of the 20th century (Figure 8, Figure 9, Figure 10, and Figure 11). The first building, the main administrative building, was constructed in 1935, followed by the *General Utility* building completed in 1936 (Woodward and Osmon 1992:4, Figure 1). These buildings were refurbished in the 1980s and a ramada was added above the eastern entrance of the *Administrative* building in 1994 (Figure 13).

A corrugated metal building called the *Seed Storage* building (1963) is located directly west of the administrative buildings. The Seed Storage building contains equipment, a grain elevator, a seed cleaning hammer mill, and serves as cold storage for plant materials associated with “foundation fields” and the National Seed Bank (Figure 14). North of this structure is the *Agricultural Resources* building (ca. 1966). This building contains equipment from the mid-20th century as well as historic-age furniture acquired from Davis Monthan Air Force Base (Figure 15).

A vehicle shelter is located in the southwest portion of the headquarters and an equipment storage shelter is in the northwest corner of the same area. The storage shelter is near the southernmost agricultural fields, just east of the railroad. Two weather stations, one historic and one modern, are also in the headquarters area. The modern station monitors soil moisture and humidity. Although Character Area 1 has experienced considerable changes since the 1960s, (see History), its function remains the same.

Fronting the administrative buildings, there was once a lush Bermuda grass lawn (Figure 16). In the late 1960s, the lawn was replaced with drought-tolerant and native plant species more in keeping with responsible water usage for an arid environment (Figure 17). Several of the large, historic trees were preserved in place, but many others have been removed over time (Figure 18 and Figure 19). In place of the lawn, large granitic boulders and gravelly sand cover the grounds and an historic seeder is displayed near the entrance of the Administrative building. At the edge of the former lawn, a six-foot tall metal fence, erected in 2010, encircles the headquarters and the nursery.

Character Area 2: The Nursery

The nursery is located in the southernmost area of the TPMC just beyond the administrative buildings and is directly south of the parking lot. It is a semicircular designed landscape with native and non-native species. Yucca (*Yucca sp.*) and agave line the northern edge of the nursery and two large palo verde trees (*Parkinsonia praecox*) shade portions of the parking lot and the entrance. Additional vegetation in the nursery includes desert willow (*Chilopsis linearis*), butterfly bush (*Buddleia marrubifolia*), little leaf cordia (*Cordia parvifolia*), pomegranate (*Punica granatum*), creosote (*Larea tridentata*), eucalyptus (*Eucalyptus microtheca*) (dead), Aleppo pine (*Pinus halepensis*), California fan palm (*Washingtonia filifera*), cholla (*Cylindropuntia sp.*), Indian rosewood (*Dalbergia sissoo*), olive tree (*Olea europea*), Afgan pine (*Pinus eldarica*), eucalyptus (live) (*Eucalyptus microtheca*), red yucca (*Hesperaloe parviflora*), saguaro (*Carnegiea gigantea*), sweet acacia (*Acacia farnesiana*), salt bush (*Atriplex canescens*), mesquite (*Prosopis velutina*), Mexican palo verde (*Parkinsonia aculeata*), African sumac (*Rhus lancea*), senna (*Senna covesii*), cottonwood (*Populus fremontii*), and one Argentine mesquite (*Prosopis alba*). Of the plants in the nursery only the Argentine mesquite is identified with a marker. The marker—erected in 1978—is a poured concrete and metal memorial dedicated to E. P. “Phil” Young. Phil Young served as the TPMC superintendent from 1966 to 1977. The memorial tree, in addition to an understory of Mexican Bird of Paradise (*Caesalpinia mexicana*), creates a shaded seating area in Character Area 2 (Figure 20).

Structures in the nursery include a greenhouse, a rectangular shadehouse, a metal storage unit, and a corrugated metal storage shed (Figure 21 and Figure 22). A compost pile is located near the storage shed and abuts the metal perimeter fence to the west. Located in the southern area of the nursery, are three conglomerate concrete and rebar footers of unknown function that were likely in use prior to the 1950s. Also in the nursery is a segment of heavy gauge chain, three pieces of historic-age farm equipment, and a well that continues to

be used in modern times. Farm equipment displayed in the nursery consists of a 1930s-era harrow and two mid-to-late 20th century implements used for seeding and harvesting (Figure 23).

Character Area 3: The Agricultural Fields

The agricultural fields comprise the bulk of the TPMC property and extend north of the headquarters. Fields are divided into 10 distinct plots covering a total of 37.8 acres (Figure 24). Within each field several different plant species are grown at any given time. Crops rows run both east/west and north/south. However, the furrows in each field are not consistently plowed in the same direction. The fields are separated by dirt access roads and a large lateral drainage canal that traverses the property from east to west. The canal is located in the northern area of the fields. Each of the fields is used to support the plant research performed by TPMC staff and affiliates. The crops are flood irrigated from the well on-site through the use of an underground pipeline system. At the ends of rows are red top alfalfa valves that are opened periodically to water the crops. Currently the fields contain a variety of range grasses and forbes: sideoats grama (*Bouteloua curtipendula*), a pollinator mix of globe mallow (*Sphaeralcea coccinea*), fairy duster (*Calliandra eriophylla*), and dalea (*Dalea pulchra*), desert zinnia (*Zinnia acerosa*), and giant sacaton (*Sporobolus wrightii*) (Figure 24, Figure 25, and Figure 26).

Character Area 4: Linear Features

Linear features within the TPMC landscape are characterized as those that function as permanent, man-made physical boundaries and/or are those that both physically and visually delineate boundaries. Man-made linear features include the following: a chain link fence surrounding agricultural fields, a six-foot high metal perimeter fence surrounding the headquarters and the nursery, a wide lateral concrete canal extending from the Santa Cruz River (Figure 27), smaller concrete-lined canals constructed to divert water and prevent flooding (Figure 28), Romero Road, Prince Road, and Union Pacific Railroad. In the northeastern portion of the landscape a residential community has been constructed and encroaches on fields three, five, seven, and nine.

In addition to man-made linear features, a series of planted trees form six additional linear features. Rows of various species of eucalyptus line both sides of the wide lateral canal near the center of the landscape. These are believed to represent both windbreaks and experimentation to test which species were most productive in a desert climate. A row of Afghan pines (*Pinus eldarica*) also serves as a windbreak and is located on the eastern edge of field three. A row of

giant reed (*Arundo donax*) lines the west edge of field two. Most prominent in the landscape are two rows of native Kofa Queen palms (*Washingtonia filifera*). The palms were propagated from seeds collected in Palm Canyon in Yuma, Arizona. The first colonnade forms a slight diagonal of eight adult palms near the east edge of field five (Figure 29). The second row contains seven large palms with a few immature palms interspersed between the larger trees. This row appears to be part of the original experimental cultivation efforts as it is oriented east/west along the northern margin of field three (Figure 30).

History: *The Prehistoric and Historical Development of the Tucson Plant Materials Center Landscape*

The Prehistory of the TPMC Landscape

The history of the TPMC landscape begins with the colonization of the Santa Cruz River floodplain by prehistoric peoples beginning as early as the Middle Archaic period—some 5,000 years ago—and continuing into late prehistoric times. Nearby village sites associated with early agriculturalists and the Hohokam cultural group, include Square Hearth (AZ:AA:12:745[ASM]) and Santa Cruz Bend (AZ:AA:12:85[ASM]). These aboriginal groups engineered the river by investing in extensive canal irrigation systems. In the far northwest corner of TPMC, archaeological monitoring of Interstate-10 improvements revealed a buried cultural horizon. This horizon is associated with a larger archaeological site (AZ:AA:12:16[ASM]) that was first observed in late 1937. Called the BK Ranch site, the first recordation, as reported by Frank Mitalksy, mentions prehistoric chipped stone artifacts as well as two concrete silos marking the BK dairy and ranch, and the remnants of a defunct earthen tank. The prehistoric use of the site where the center was later constructed indicates a rich history of occupation involving variable methods of plant cultivation.

The Great Depression, the Dust Bowl, and the New Deal

With the onset of the Great Depression in 1929, Arizona witnessed a marked population decrease and, through the course of the 1930s, saw limited economic growth. Life began to improve however, with the inauguration of Franklin Delano Roosevelt and the creation of various government bureaus established to counteract the negative impacts of the depression and provide jobs for American citizens. The “alphabet agencies,” like the Civilian Conservation Corps, Works Progress Administration, and Public Works Administration, among others, began work projects throughout the country and

employed veterans and men between the ages of 18 and 25 whose families were on the relief roles (Collins 1999).

Facilitated by the over-cultivation of land throughout the United States in the late-19th and early-20th centuries, the Dust Bowl culminated in the erosion of 172 million acres of cropland (Sharp 2013: 11). This environmental disaster saw expanses of soil, eroded by wind and water and swept up by major windstorms, block out the sun on occasion, and wreak havoc on the Midwest and Great Plains areas. The effects of the Dust Bowl were compounded by the simultaneous stock market crash of 1929. As a result, Roosevelt increased the numbers of civilians working on Emergency Conservation Works projects, specifically public works projects related to soil conservation, in locations where lumber mills, mining, and cattle ranching had severely affected the local environment.

The Soil Erosion Service

As citizens grappled with how to deal with environmental and economic collapse, President Franklin D. Roosevelt lead the charge to create supportive legislation, known as the New Deal, that allowed the government to form relief agencies and programs to employ struggling Americans. Some of the more noteworthy programs that the New Deal created were the Emergency Banking Act/ Federal Deposit Insurance Corporation (FDIC), the Civilian Conservation Corps (CCC), Civil Works Administration (CWA), the Works Progress Administration (WPA), and the Soil Erosion Service (SES).

Soil conservation programs undertaken by facilities like TPMC were instituted after the passage of the National Industrial Recovery Act of 1933. This legislative act involved the allocation and expenditure of five million federal dollars to stimulate industrial growth. Included in this stimulus package, was the creation of the Soil Erosion Service (SES) (Sharp 2013: 20).

Within the first two years of its tenure, the SES underwent reorganization. In 1935 the SES was transferred from the Department of the Interior to the Department of Agriculture. Following the passage of the Soil Conservation Act of 1935 (Navarre and Briggs 1996:(8)1-2), it was then managed as the Soil Conservation Service (SCS). The SES/SCS was established to combat the negative effects of the Dust Bowl and 48 research facilities were built to cultivate experimental plant materials (Navarre and Briggs 1996:(8)2). The nurseries focused their research on discovering which plants might prevent further soil degradation and subsequently aid Americans in sustainably reestablishing themselves in farming and ranching enterprises.

Plant Materials Centers and the Civilian Conservation Corps

Because the Dust Bowl occurred concurrently with one of the worst economic periods in the history of the U.S, there were many unemployed Americans who could be put to work at the nurseries. One group associated with experimental plant materials nurseries was the Civilian Conservation Corps (CCC). The CCC was a work relief program formed by New Deal legislation for the purpose of training young men to become skilled laborers. One CCC contingent was housed at the Tucson Plant Materials Center (TPMC) and participated in its construction (Navarre and Briggs 1996). The TPMC is one of four research facilities established during the Dust Bowl by the SES/SCS that still functions today (Sharp 2013: 21).

Hugh H. Bennett was the first chief of the Soil Conservation Service (SCS) and was charged with the development of plant materials centers across the United States (Navarre and Briggs 1996:(8)2). In Tucson, Dr. Franklin J. Crider established the first Arizona state plant materials research facility (TPMC) and served as its first Regional Director. Dr. Crider functioned as director between 1934 and 1936 where after he was transferred to Washington D.C. (Sharp 2013:27). During his time in Arizona, Dr. Crider was head of the Department of Horticulture at the University of Arizona from 1918 until 1924 and is credited with discovering the rooting of high date palm offshoots (Sharp 2013:27-28). Dr. Crider also served as the director of the Boyce Thompson Arboretum in Superior, Arizona, and as a Regent at the University of Arizona (Sharp 2013:27-29).

The Depression-era History of the TPMC Landscape

Established in 1934, the mission of the TPMC was to collect quantities of propagation materials (i.e. seeds, cutting, plants) to use on the Gila, Rio Grande, and Navajo regional re-vegetation projects. The center was one of three centers serving the southwest; the Tucson center being the headquarters. Satellite nurseries associated with the TPMC were located in Shiprock, New Mexico and Safford, Arizona (Navarre and Briggs 1996:(8)2). Land for the center was acquired from the University of Arizona.

The first buildings constructed at the TPMC include the Administration building (1935) and the General Utility building (1936), followed by the Superintendent's cottage (1936), a Machinery shed (1936), a Greenhouse and Lath house (1936), a Bunkhouse (ca. 1938), and the Superintendent's garage (ca. 1938-1941) (Navarre and Briggs 1996:(7)1). All eight of these buildings

and structures were constructed by the CCC between 1935 and 1941(Figure 31).

The remaining CCC- buildings at TPMC are the Administration and General Utility buildings. The Administration building is the larger of the two and measures 3,600 square feet. Both buildings are constructed of adobe resting on poured concrete foundations, reinforced with fired-brick stem walls, and sheathed in cement-based stucco. Additionally, both buildings exhibit U-shaped floorplans that create courtyard spaces, typical of Pueblo Revival architecture (Navarre and Briggs 1996:(7)2-4). The smaller of the buildings, is the General Utility building that measures 2,363 square feet. This building is used as a maintenance garage for agricultural equipment and to store seed.

The Modern History of the TPMC Landscape

Over its developmental history, the research foci of the TPMC has shifted with the changing needs of the environment, as well as the changing needs of the facility itself. Alterations to the property's original physical character began in the mid-1960s when the Bunkhouse and Greenhouse were razed to build the Seed Storage building (Navarre and Briggs 1996:(7)1) (Figure 32). Additional plans for demolition began in 1991 and were mitigated with a series of field documentation and recommendation reports; all following the National Resources Conservation Services (NRCS) plan to demolish and replace the majority of Depression-era infrastructure. During this period, a National Register of Historic Places (NRHP) nomination was prepared and the remaining buildings were listed in the National Register of Historic Places (Navarre and Briggs 1996; Woodman and Osman 1992). A *Historic American Building Survey* report was also conducted to document the additional structures prior to demolition (HABS No. AZ-159). Of the original complex, only two Depression-era buildings remain.

By 1945, the Southwestern U.S. encompassed an area totaling 269, 699, 000 acres. Of that acreage, 103, 342,000 acres were farms, with 89,000,000 acres of all farmland dedicated to grazing (Schoffelmayer 1945). As these estimates suggest, facilities like TPMC were integral in combating environmental degradation not only in the southwest region, but also across the nation. And through these efforts, the TPMC contributed significantly to reestablishing large tracts of grass and rangelands. Over the years the TPMC has continued to be instrumental in researching and supplying seeds mitigating the negative effects of erosion and in the restoration of healthy rangelands.

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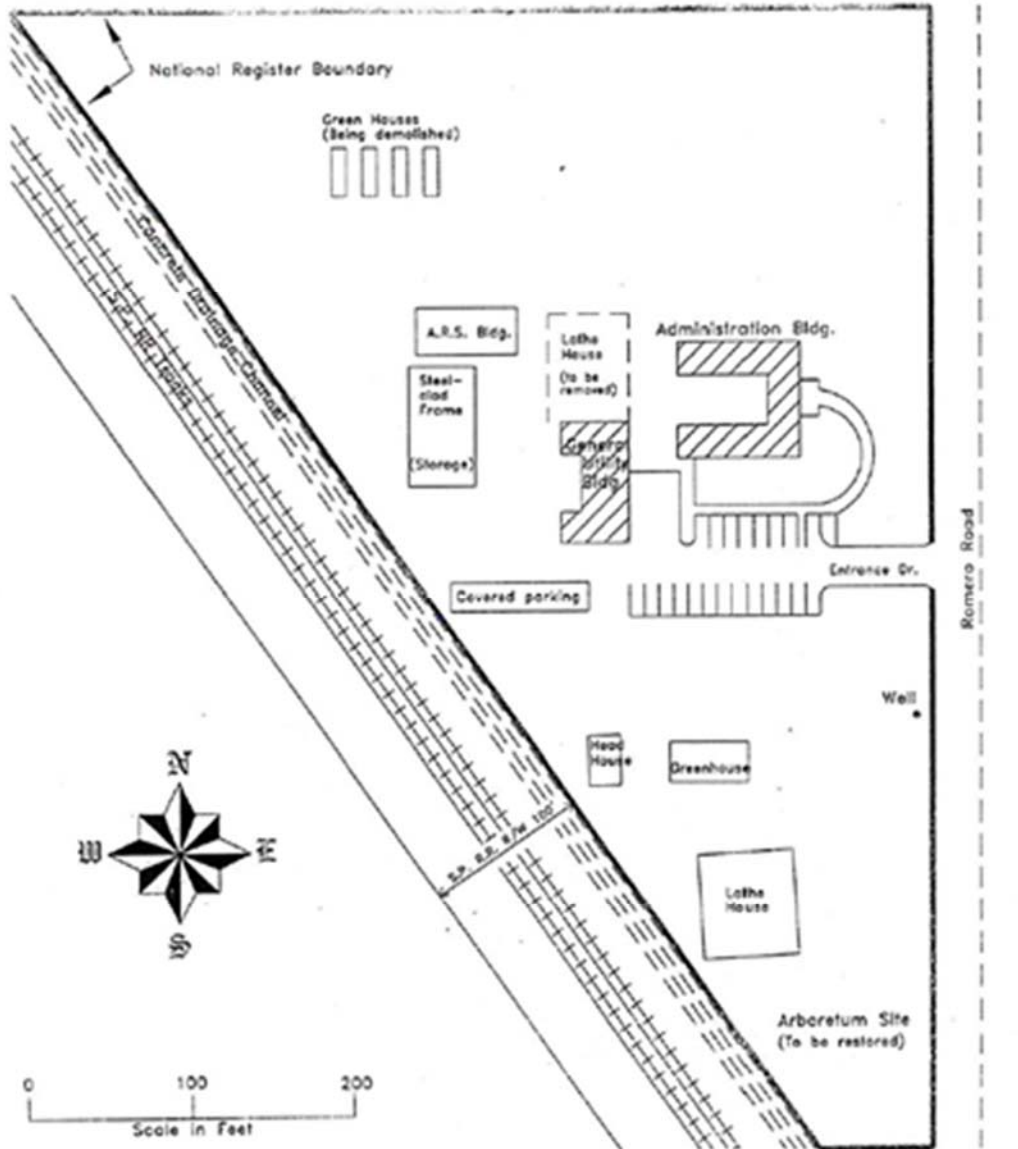


Figure 1: National Register of Historic Places map, showing south quarter of the TPMC; Courtesy of Navarre and Briggs (1996).



Figure 2: Location of USDA Plant Materials Center in Arizona; Prepared by Megan Brooks, 02/16/2014.

Location of USDA Plant Materials Center

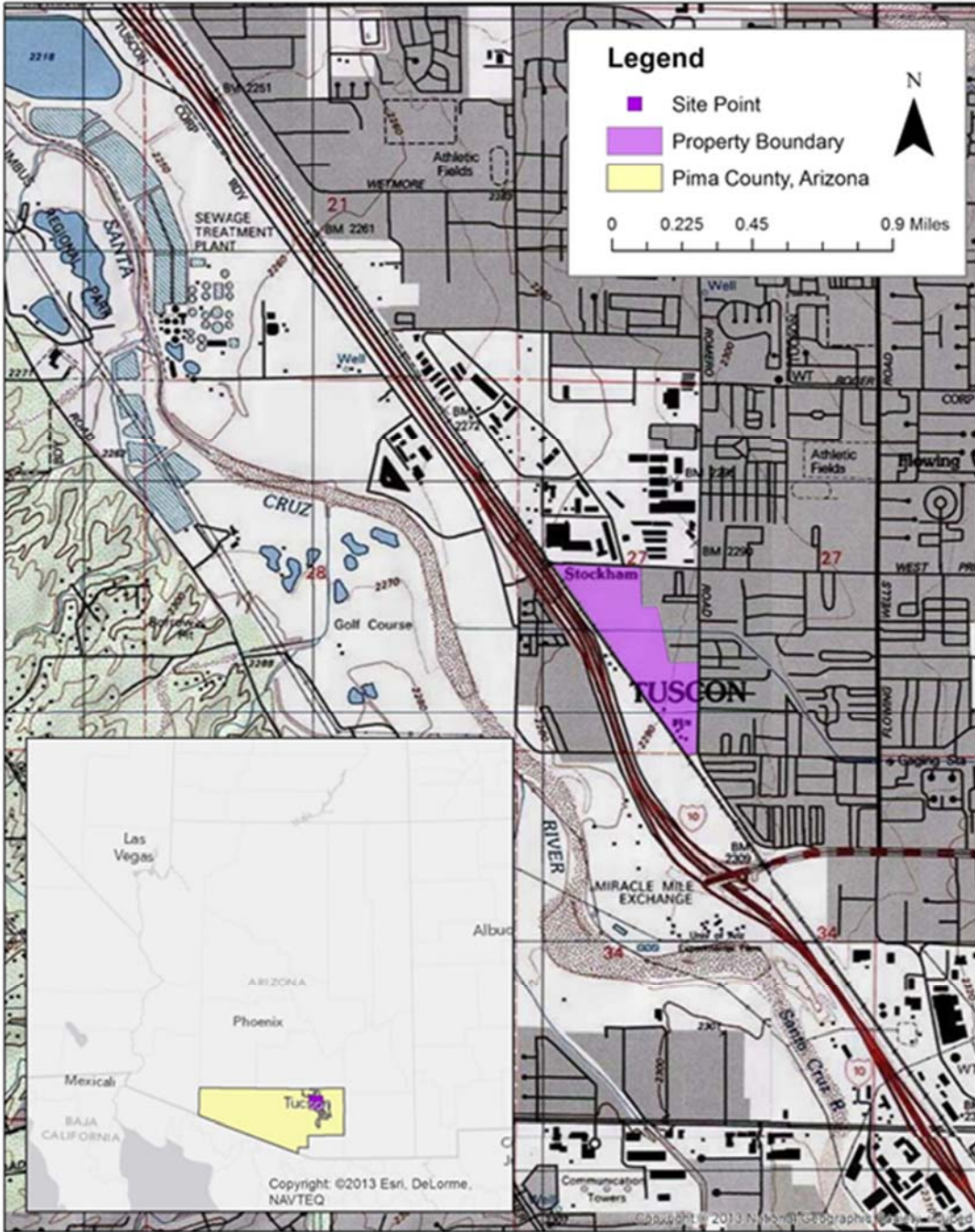
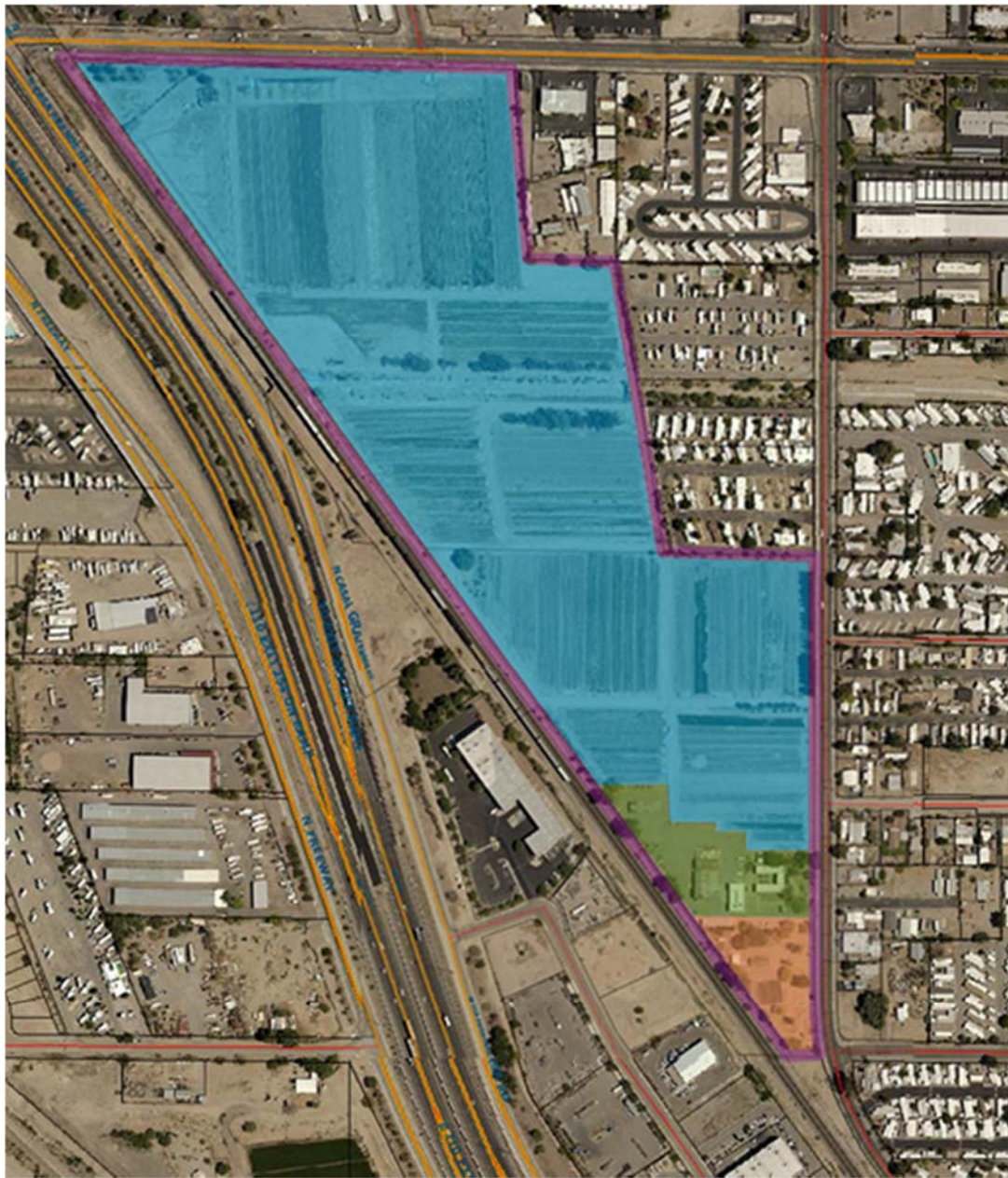


Figure 3: ArcMap image (ESRI), showing the Tucson location of USDA Plant Materials Center; Prepared by Cannon S. Daughtrey, 02/14/2014.

Counties Within the TPMC Service Area



Figure 4: Service Area map; image courtesy TPMC, 02/02/2014.



- Headquarters
- Cultivated Features (Agricultural Crops)
- Designed Landscape (Nursery)
- Linear Features

Figure 5: Pima County MapGuide plan view of the TMPC with character areas 1-4; Prepared by Megan Brooks, 02/16/2014.



Figure 6: Pima County MapGuide map showing USDA Plant Materials Center fields;
Prepared by Megan Brooks, 02/16/2014.



*Figure 7: The headquarters with the Administrative Building looking southwest (unknown date).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 8: The headquarters with the Administrative Building looking northwest.
Photo by: Cortney West (2014).*



*Figure 9: The headquarters with the Administrative Building looking northeast (ca. 1930s).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 10: The headquarters with the Administrative Building looking northeast.
Photo by: Caitlin Brown (2014).*



*Figure 11: The headquarters with the Administrative Building looking west (ca. late 1930s).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 12: The headquarters with the Administrative Building looking west.
Photo by: Cortney West (2014).*



*Figure 13: Front entrance of the Administrative Building and ramada, looking northwest.
Photo by: Cortney West (2014).*



*Figure 14: Seed Storage Building, looking west.
Photo by: Caitlin Brown (2014).*



*Figure 15: Agricultural Resource Center and storage, looking southwest.
Photo by: Caitlin Brown (2014).*



Figure 16: Bermuda grass lawn in 1941, showing view of northern facade of the TPMC headquarters. Photo Courtesy: Heather Dial (TPMC).



Figure 17: Naturalistic landscape, view of the headquarters' east façade, facing north.

Photo by: Cortney West (2014).

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*Figure 18: Tree lined entrance to TPMC in 1941.
Photo Courtesy: Heather Dial (TPMC).*



*Figure 19: Parking lot separating the headquarters and the nursery, looking east.
Photo by: R. Brooks Jeffery, 2014.*



*Figure 20: Southern end of TPMC, looking southwest.
Photo by: Caitlin Brown (2014).*



*Figure 21: View of the nursery (shadehouse) looking northwest.
Photo by: Cortney West (2014).*



*Figure 22: Greenhouse looking southwest.
Photo by: Cortney West (2014).*



*Figure 23: The nursery with seeding and harvesting equipment, looking southwest.
Photo by: Caitlin Brown (2014).*



*Figure 24: Agricultural fields looking northwest (unknown date).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 25: Agricultural fields looking west.
Photo by: Cortney West (2014).*



*Figure 26: Agricultural fields and headquarters looking south.
Photo by: Cortney West (2014).*



*Figure 27: Lateral canal traversing agricultural fields, looking west (unknown date).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 28: Flood control canal, south of the nursery, looking east.
Photo by: Cortney West (2014).*



*Figure 29: Agricultural fields and linear features (Kofa palms) looking northeast.
Photo by: Cortney West (2014).*



*Figure 30: Agricultural fields and young Kofa palms (unknown date).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 31: The headquarters from agricultural fields (ca. 1930s).
Photo Courtesy: Heather Dial (TPMC).*



*Figure 32: Greenhouses prior to demolition (unknown date).
Photo Courtesy: Heather Dial (TPMC).*

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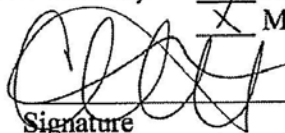
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