**Facilities System**

**Basic System Description:** The Facilities System described in this section is focused on the General Purpose Facilities on the Hanford Site. There are a total of 1,090 active operational and inactive facilities (buildings and mobile offices) managed by the prime contractors on the Hanford Site. These facilities are tracked in the DOE Facilities Information Management System (FIMS). Of the 1,090 total facilities, 236 are in non-operational status awaiting final disposition. Of the remaining 854 operational facilities, 421 are unique facilities dedicated to support specific mission elements. These include radiological, programmatic and infrastructure support facilities. The remaining 426 facilities represent the general purpose facilities which meet the following criteria: operating buildings or trailers; greater than 500 ft²; being used as office, warehouse or shop space. A subset of the general purpose facilities include those that are currently dedicated to a specific program, and called Dedicated General Purpose Facilities. These are a group of facilities that currently are dedicated to a specific Hanford mission but upon completion (or change) of that mission could easily be repurposed to support other Hanford missions. The Facilities System description is focused only on the 305 general purpose facilities (GPF). A minor difference in total general purpose facilities (305) shown in Figure 3.1 and 303 buildings on Table 3-1 are the HPMC lease (first floor 1979 Snyder) and the Federal Building lease.

![Diagram of Facilities System](image)
These general purpose facilities are comprised of office space, shops, and warehouses. Attributes for Facility Systems are provided in Table 3-2.

**Current Condition FY2017:**

- **Utilization:** All contractors report at full utilization (above 90%). MSA, CHPRC and DOE_RL are currently in the process of relocating DOE personnel to the Stevens Center complex and backfilling the Federal Building Space with Hanford Contractor personnel. WRPS is in the process of occupying the newly built 24,000 ft² leased office facility in the north Richland Smart Park area. This facility houses approximately 120 engineers and procurement staff supporting operational staff ramp up to support WTP once it becomes operational.

- **Reliability:** Reliability is moderate to low since most buildings are well beyond end life. There are numerous programs established to upgrade, repair and replace facility and facility attributes to meet mission requirements. Roofs, HVAC and fire safety system replacement requirements remain a challenge based upon competing funding priorities.

- **Population Served:** 6,733. This figure is the current projections for office personnel directly supporting the Hanford mission in government owned or lease space. This figure covers office space occupied by BNI, CHPRC, MSA, WRPS, and One System Group. The population figure excludes PNNL, BPA, and LIGO.

- **Areas Served:** General purpose office facilities are primarily located in the Central Plateau, HAMMER, and the City of Richland.
Site-wide general purpose facility office supply level remains fairly constant at approximately 1,761,818 ft² in FY2017, comparable to the total size in FY2016.

The funded WRPS sponsored facilities projects to replace existing facilities plus add new office facilities in the 200E Area are now completed. Most facility changes site-wide took place in the central part of 200E Area. The replacement and new facilities are in the vicinity of A farms and C farms, located between 4th and 7th along both side of the Buffalo Road corridor, to support tank operating contract activities, including adding change trailers, control trailers, restrooms and offices that support adding recommended engineering controls as a graded step improvement for vapor emissions in the vicinity of existing tanks.

Approximately 10% of government-owned facilities will exceed end-of-life conditions. Overall, office demands are forecasted to be slightly lower as well, consequently offsetting the office availability requirements for MSA and CHPRC. In the FY2021 period, it is possible significant WRPS office demands could become apparent as WRPS prepares to support the WTP operational ramp up. WRPS is currently drafting a strategic plan outlining future facility requirements. In the meantime, WRPS is leveraging trailer availability from CHPRC to house outer area personnel. This forecast does not account for WTP office space planning because information is not available at this time. The WTP operational staffing model (number of shifts, 24/7 day operations, production volumes, additional Low-Activity Waste [LAW] modules, offsite and onsite support staff, levels of sustainability) is currently under evaluation. The One System Group provides updated model of facility needs as new information is released and made available.

**End State FY2022:**

- **Condition:** Due to deferred maintenance, only Fair for the government owned portion of 906,479 gross ft² of available general-purpose office category space.

- **Utilization:** Facility obsolescence will continue to be a challenge for Hanford contractors. The majority of Hanford facilities are well beyond their designed life. Contractors will continue maintaining these aging facilities to achieve 90% or above utilization goals. New acquisition of mobile trailers is anticipated to offset facilities that won’t support contractor’s mission requirements. In addition, plans are being considered to add a Tank Farms Operations building that would provide a significant amount of office space on the central plateau.

<table>
<thead>
<tr>
<th>Table 3-2: Facilities System Attributes</th>
</tr>
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<tbody>
<tr>
<td><strong>Operate, Safe &amp; Regulatory Compliant System</strong></td>
</tr>
<tr>
<td>- Continued application of ISMS, EMS and VPP principles.</td>
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<tr>
<td><strong>Availability, Right-Size &amp; Reduce Active Site Footprint</strong></td>
</tr>
<tr>
<td>- Maintain facility assignments in the Site Structures List.</td>
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<tr>
<td>- Continual evaluations of complex footprint reduction for non-mission critical facilities.</td>
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<tr>
<td>- Reduced impact footprint.</td>
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<tr>
<td><strong>Sustainability &amp; Minimize Impacts to Environment</strong></td>
</tr>
<tr>
<td>- Consistent with Hanford’s Vision to “Be a leader in sustainability and green energy”</td>
</tr>
<tr>
<td>- Perform sustainability evaluations for major repairs, replacements, or upgrades.</td>
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<tr>
<td>- Reductions in lifecycle costs.</td>
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<tr>
<td>- Reductions in resource consumption.</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
</tr>
<tr>
<td>- Condition assessment surveys performed at least once every 5 years.</td>
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<tr>
<td>- Ongoing process improvements and cost savings.</td>
</tr>
<tr>
<td>- Forecasted capital upgrade projects to maintain facility operability.</td>
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<tr>
<td>- Implement planned improvements.</td>
</tr>
<tr>
<td><strong>Maintainability</strong></td>
</tr>
<tr>
<td>- Maintain qualifications for maintenance and operations for the facility.</td>
</tr>
<tr>
<td>- Implement strategies from the Site-wide Maintenance Management Program.</td>
</tr>
<tr>
<td>- Enhanced predictive, preventive and corrective maintenance.</td>
</tr>
</tbody>
</table>

- **Reliability**: Percent usable when needed. Reliability is high because few events would make office space unusable.

- **Population Served**: 6,395. Includes current projections for office personnel directly supporting the Hanford mission who sit in both government owned or lease space. Excludes PNNL, BPA, and LIGO.

- **Areas Served**: Primarily the Central Plateau, HAMMER, the PTA, and the City of Richland.

**Shops**: The Hanford Site’s total shop space equates to 26 facilities supplying approximately 152,690 ft². With the exception of a few recently constructed shop facilities, approximately 60% of the existing shops are very old and in poor physical condition. Based on forecasted funding and mission requirements, the demand for shop space is forecasted to be constant through FY2020. This forecast does not account for WTP shop requirements because information is not available at this time. WTP is in the process of developing the WTP Infrastructure Model to address shop space needs to operate the WTP and waste feed operations. The One System Group provides periodic updates.

**Warehouses**: There are 20 warehouse facilities supplying approximately 313,587 ft² of warehouse space. The Business Case Analysis for Warehouse Consolidation Pilot Project (HNF-51927) was performed second quarter of FY2012. From the data analyzed, WCH leased warehouse space demand concluded with the end of their contract assuming there was no transfer of scope continuity to another prime contractor. DOE-RL directed CHPRC to provide the continuation of ongoing work scope including 324, 618-10, and ERDF. As such, the 35,000 square feet of ENW warehouse space formerly utilized by WCH already transitioned to CHPRC. The balance of CHPRC and MSA warehouse space requirements will remain constant through FY2020. WRPS and MSA contractors are utilizing shared central storage at 2101M and in FY2012 released leased space at ENW resulting in a reduction of approximately 45,000 ft² held by CHPRC and WRPS.

WTP project sponsors recently acquired 184,000 ft² of commercial warehouse space to accommodate storage of construction materials. This warehouse size does not account for WTP total onsite warehouse requirements. WTP is developing the WTP Infrastructure Model to address warehouse space needs to operate the WTP, DF LAW, LAW PS and waste feed operations. The One System Group provides periodic updates.

**Footprint Reduction**: FIMS indicates the footprint reduction at the Hanford Site is closing and removing 15 of the 236 existing inactive facilities by FY2022 (FIMS Disposition date – 2017 through 2022). As these facilities are closed and demolished, the utilities serving the buildings can be decommissioned, removed, or abandoned in place. These facilities are currently in various lifecycle phases ranging from “D&D” to “Shutdown Pending D&D or Disposal,” to “Deactivated.”

**Existing Gaps**: As previously noted, WRPS is attempting to acquire office facilities in preparation for WTP operations. Contractors will continue to occupy facilities that are will past their designed lifecycle. As such, large facility assets (HVACs, roofs, and fire safety systems) replacement requirements will continue to challenge contractors facing funding limitations.

**Cost Savings Proposals**: Refer to Appendix F.

**Major Actions/Decisions Needed**: Refer to Appendix E. Based on forecasted Hanford Site mission needs, coupled with a backlog of facility maintenance/upgrades, a funding initiative is required to address facility replacement needs including energy and water savings upgrades as one long-term program with a realistic annual average goal.

**Roadmap**: Refer to Figure 3-2 showing this major trend over the next 5 years:

- Total existing active buildings in FY2017: 853 active
• Total existing active buildings in FY2022: 838 active

Revised: September 11, 2017
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Figure 3-2. Facilities Footprint Roadmap

Facilities Roadmap

**2017 CURRENT CONDITION**

- 15,039 total Hanford Site workforce (including tenants)
- Total of 797 active facilities (buildings and MOB) including leased office and warehouse space
- 25 leased facilities (office and warehouses)
- 230 general purpose facilities (office, shop and warehouse)
- 50 facilities scheduled for D&O through FY2022 (based on Facilities Information Management Systems disposition data)
- 6,733 office population served (preliminary 2017 projection - Hanford Mission support only)
- Target occupancy rate of 85% for general purpose office facilities

**END STATES 2022**

- 15,272 projected total Hanford Site workforce (including tenants)
- 767 active facilities (building and MOB) including leased office and warehouse space
- Over 220 general purpose facilities (office, shop and warehouse)
- Achieve and maintain occupancy rate of 90% in office facilities
- Approximately 30 facilities demolished (the majority around PP in the 200W Area)
- New major facilities anticipated to be completed:
  - Tank farm office support facility
  - New WTP facilities including Waste Treatment Laboratory, balance of plant facilities and L&H Facility
- 6,306 projected office population served (preliminary 2017 projection)
- Target occupancy rate of 90% for general purpose office facilities

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**Project Descriptions**

- L.665, Replace Boiler Chps for MSA General Use Facilities
- L.680, 400 Area Fire Station
- L.755, Replace Emmet Hot Replacement (includes MGF project 27F)
- L.758, 210 M FAC Replacement
- L.759, Auxiliary Facilities Replacement
- L.760, Fire Facilities VAM Replacement
- L.772, Fire Systems Maintenance Consultation
- L.846, Construct Biological Control Facility/Construct Design Report/Define Design & Construction
- L.885, Maintenance Building/Facilities/Design/Construction
- L.759, Upgrade Surfactant Deposition Generation (Emergency Generators: 134N-SW, WPUE-2027, WPUE-2028, Rheniwer-3272)
- L.846, Support Maintenance Building (Recessed), 846-5L, 75F
- L.850, Facility Roof and HVAC Replacement

**Major Actions/Decisions**

- Office (Facilities) Planning Support for New Administration Building T&D
- Facility Master Plan update

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36 Project years are based on reliability Project Investment Portfolio List version 3rd Qtr 2017
37 Project Supports LAMPS