

9.0 Well Installation, Maintenance, and Decommissioning

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This chapter describes the new well and characterization borehole installations and the maintenance activities conducted on the Hanford Site's Central Plateau during the calendar year (CY) 2009. The Central Plateau contains the following operable units (OUs): 200-BP-5, 200-PO-1, 200-UP-1, and 200-ZP-1.

Although previous annual groundwater monitoring reports covered fiscal year (FY) time periods, this report describes the groundwater monitoring results for the 15-month period from October 1, 2008, through December 31, 2009. As a result of this change, the following date conventions are used within this chapter:

- Fiscal year (FY) 2009: Refers to the fiscal year named (e.g., October 1, 2008, through September 30, 2009).
- Calendar year (CY) 2009: Refers to the calendar year named (e.g., January 1, 2009, through December 31, 2009).
- Reporting period: Refers to the entire 15-month reporting period covered in this report (i.e., October 1, 2008, through December 31, 2009).

Approximately 10,416 unique well identification numbers have been assigned at the Hanford Site. All wells, characterization boreholes, aquifer tubes, soil tubes, piezometers, and other subsurface excavations are required to receive a unique Hanford well identification number. All wells are also required to have a state well identification number, which is tracked by the Washington State Department of Ecology (Ecology). Figure 9-1 presents the categorization of unique well identification numbers from the Well Information and Document Lookup (WIDL) database and their approximate geographic designations. Figure 9-2 identifies the geographic designations for the Hanford Site.

During CY 2009, a total of 3,498 unique well identification numbers were documented as in use, which includes 2,849 wells; 121 piezometers within host wells; 496 aquifer tubes; and 32 soil tubes. Section 9.1 discusses new well installations and provides information on fourteen wells. Section 9.2 describes the 95 characterization boreholes installed during CY 2009 in the Central Plateau. The well maintenance completed for 194 wells in CY 2009 is discussed in Section 9.3. Section 9.4 discusses the well that was decommissioned in the Central Plateau in CY 2009.

9.1 Well Installation

The Soil and Groundwater Remediation Project, working with the U.S. Department of Energy (DOE) and the appropriate regulatory agencies, defines the need for new wells at the Hanford Site. Each year, the groundwater project identifies new wells to meet the requirements of the *Resource Conservation and Recovery Act of 1976* (RCRA) detection and assessment groundwater monitoring requirements; characterization, remediation, and monitoring for the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA); and long-term monitoring of regional groundwater plumes in accordance with DOE orders, based on requirements of the *Atomic Energy Act of 1954* (AEA). These efforts include ongoing RCRA assessment of groundwater contamination, replacement of monitoring wells that go dry due to the declining regional water table, replacement of wells that need to

be decommissioned, improvement of spatial coverage for the detection monitoring networks or for plume monitoring, and characterization of subsurface contamination.

New RCRA, CERCLA, and AEA well proposals are reviewed, prioritized, and approved annually as required by the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al., 1989) Milestone M-24. All new wells are resource protection wells and are constructed or decommissioned in accordance with the provisions of *Washington Administrative Code* (WAC) 173-160, "Minimum Standards for Construction and Maintenance of Wells." Well needs are integrated and documented through development of the groundwater project's budget, discussions with the regulators, and monitoring needs. Ecology, the U.S. Environmental Protection Agency (EPA), and the DOE annually negotiate an integrated well drilling list that coordinates and prioritizes the requirements of RCRA, CERCLA, and AEA under Tri-Party Agreement Milestone M-24-57. Funding from the *American Recovery and Reinvestment Act of 2009* was used to begin planning and installation of new groundwater and deep vadose zone monitoring wells, borehole sampling, treatability tests, and remediation systems helping to achieve the Tri-Party Agreement milestones.

During CY 2009, a total of 14 wells were installed in the Central Plateau (Table 9-1). These wells were constructed to support activities funded under either Tri-Party Agreement Milestone M-24 or other project-specific activities. The approximate locations of the new wells are shown in Figure 9-3.

The following provides information for the 14 wells installed in the Central Plateau during CY 2009 to support Tri-Party Agreement Milestone M-24:

- One well to gather supplemental data for a remedial investigation/feasibility study at the BC Cribs
- One well to support implementation of the Liquid Effluent Retention Facility groundwater evaluation plan
- Three extraction wells to support 200-ZP-1 pump-and-treat system operations
- One vapor extraction well at the BC Cribs to support soil desiccation pilot testing
- Five direct-push technology wells to support BC Cribs soil desiccation pilot testing
- Three wells to correlate surface geophysical exploration at the BC Cribs.

Water well reports for all newly constructed wells, as required in WAC 173-160, were submitted to Ecology and added to the Ecology well log database. Detailed well information such as geologic and geophysical descriptions, a listing of characterization activities (i.e., sediment and groundwater sampling, aquifer testing, and geophysical logging), and construction records for the new wells is stored in the Integrated Data Management System database. Selected drilling and well construction information (e.g., drill depth and screen interval) also are entered in the WIDL database, which is contained within the Hanford Environmental Information System (HEIS) database, and are accessible through the Environmental Dashboard Application.

9.2 Characterization Boreholes and Direct-Push Technology Installation

During CY 2009, direct-push boreholes were installed in the BC Cribs area for deep vadose zone characterization. Characterization borings are the same as an environmental investigation well and are a subclass of resource protection wells. The boreholes are installed for subsurface characterization of radiological constituents,

volatile organics (e.g., carbon tetrachloride), or hydrologic property determination (e.g., moisture or grain-size distribution). While typically installed to characterize the vadose zone, borings can be drilled to groundwater to obtain a one-time sample at the general location of these boreholes. Table 9-2 provides a summary of the number and general location of these direct-push boreholes. The approximate locations of the new characterization borings are shown in Figure 9-3. The following 95 characterization boreholes were installed in the Central Plateau during CY 2009 to support Tri-Party Agreement Milestone M-24:

- Five direct-push technology air permeameter characterization boreholes at the BC Cribs to support soil desiccation pilot testing
- Three characterization boreholes for sampling support in the 200 North Area
- Eighty-seven soil vapor characterization boreholes in the Low-Level Burial Ground Trench 7.

9.3 Well Maintenance

During CY 2009, non-routine maintenance was completed on 194 wells in the Central Plateau. A summary of non-routine maintenance activities by regulatory program is presented in Table 9-3. Non-routine maintenance tasks, which include surface and subsurface aspects, are varied and depend on the specific problem encountered at a well. Several wells required multiple visits to correct new or recurring problems. Other maintenance included replacement of locking well caps, casing repairs, diagnosis and repair of surface electrical wiring, and pump-discharge fittings. Subsurface tasks typically include repairing and replacing sampling pumps, performing camera surveys, pump and equipment retrieval, and discharge tubing replacement.

In the past, the distinction between routine and non-routine maintenance activities was based on a set group of activities and a 5-year cleaning cycle. Currently, any well requiring maintenance to preserve sampling efficiency is repaired under the non-routine maintenance program. This means that if a project scientist determines that a well is losing sampling efficiency, the tasks typically conducted under routine maintenance (i.e., surge block swabbing, screen brushing, or well development) can be conducted as non-routine tasks. Therefore, while not following a 5-year maintenance schedule, wells are still maintained to meet specific project and schedule requirements.

9.4 Well Decommissioning

A well becomes a candidate for decommissioning under one of the following conditions:

- The well use has been permanently discontinued (i.e., the well has gone dry).
- The well condition is so poor that its continued use is impractical.
- The well is in the path of intended remediation, excavation, and/or construction activities.
- The well poses an environmental, safety, or public health hazard (e.g., casing corroded).

At this time, decommissioning is generally driven by the long-range environmental restoration schedule (DOE/RL-96-105, *Richland Environmental Restoration Project Baseline*), available funding, and provisions of WAC 173-160. In addition, the list of candidate wells for decommissioning includes wells identified in WIDL that have

no further use. However, all candidate wells must be reviewed and approved for decommissioning by the contractors, DOE, Ecology, EPA, and other potential well users (e.g., Pacific Northwest National Laboratory) prior to actual decommissioning.

During review of candidate wells for decommissioning, a records review is conducted to clearly identify the location of the wells and its attributes by performing two steps:

- A thorough review of the entries for these candidate wells in the HEIS and WIDL databases
- A review of records from other contractors.

This data are used to define and locate the wells to be decommissioned in the field. The candidate wells not found in the field after a reasonable search using field inspections, global positioning system technology, and subsurface magnetometry are considered decommissioned without previous record and are subsequently administratively decommissioned to remove them from the in-use status. A very limited number of unknown wells are also discovered during field activities. These wells are added to the Hanford Site well inventory and assigned a unique well identification number and appropriate status.

During CY 2009, a total of one soil tube well installation was physically decommissioned. Decommissioning typically involves backfilling a well with impermeable material to prevent vertical movement of water and/or contaminants. For wells that are WAC-compliant, decommissioning is typically performed by placing sand across the screen interval and filling the casing with an impermeable material (e.g., bentonite or cement grout). For older non-compliant wells, the casing is perforated and pressure grouted to create an external seal, or the casing is removed. A brass survey marker, identifying the well, is typically set in grout at the surface and over the well location. Decommissioning activities result in the permanent removal of a well, borehole, or piezometers from service and the Hanford Site active well inventory. Decommissioning is performed in accordance with WAC 173-160-460 (“Minimum Standards for Construction and Maintenance of Wells; What is the decommissioning process for resource protection wells?”), applicable well variances, and conditions defined in the Hanford Facility RCRA Permit (WA7890008967, *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*).

The DOE follows the requirements of WAC 173-160-460 with regard to well decommissioning. A completed water well report form is required to be transmitted (by the driller) to Ecology when a well is decommissioned. The report provides the details of the well’s construction and the steps taken to decommission (i.e., plug) the well. When available records are insufficient to meet the specific requirements of the well decommissioning process or if there is no record of the transmittal, the wells are administratively decommissioned (i.e., all available information is provided to Ecology to demonstrate that the well was never drilled, or that the well was drilled and subsequently plugged). Since hundreds of wells were planned but not drilled, or wells were drilled but subsequently plugged, between the Hanford Site’s inception in 1943 and 1986, these wells are candidates for administrative decommissioning. In addition, records of some wells that were planned and not drilled, or that were drilled and plugged after 1986, apparently were inadvertently not transmitted to Ecology as required. During CY 2009, there were no temporary boreholes and subsurface installations administratively decommissioned by the well management program

Table 9-1. Well Installations for the Reporting Period.

Operable Unit	Well Name	Well ID	Well Purpose	Completion Depth (ft bgs)	Drilled Depth (ft bgs)	Accepted Date
200-BP-5	299-E33-340	C5853	Well "G"; gather supplemental data for remedial investigation/ feasibility study process	326.18	358.85	10/20/2008
200-BP-5	299-E26-79	C6826	Well to support Liquid Effluent Retention Facility groundwater evaluation plan	223.20	224.76	10/7/2008
200-ZP-1	299-W15-225	C7017	Extraction well for 200-ZP-1 OU	415.0	465.0	7/30/2009
200-ZP-1	299-W14-20	C7018	Extraction well for 200-ZP-1 OU	409.78	439.0	7/30/2009
200-ZP-1	299-W14-73	C7021	Extraction well for 200-ZP-1 OU	500.9	507.5	7/30/2009
200-PO-1	299-E13-65	C7047	Vapor extraction well in BC Cribs to support SDPT	71.0	71.0	6/8/2009
200-PO-1	299-E13-66	C7051	Direct-push well to support SDPT	69.6	69.6	6/8/2009
200-PO-1	299-E13-67	C7052	Direct-push well to support SDPT	70.5	70.5	6/8/2009
200-PO-1	299-E13-68	C7053	Direct-push well to support SDPT	69.9	69.9	6/8/2009
200-PO-1	299-E13-69	C7054	Direct-push well to support SDPT	69.7	69.7	6/8/2009
200-PO-1	299-E13-70	C7055	Direct-push well to support SDPT	70.3	70.3	6/8/2009
200-PO-1	299-E13-64	C5925	BC Cribs to correlate SGE data	55.0	203.5	11/18/2008
200-PO-1	299-E13-62	C5923	BC Cribs to correlate SGE data, 4-in. vapor extraction well	54.5	361.0	11/18/2008
200-PO-1	299-E13-63	C5924	BC Cribs to correlate SGE data	82.0	248.0	11/18/2008
<p>Notes:</p> <p>bgs = below ground surface</p> <p>ID = identification</p> <p>OU = operable unit</p> <p>SDPT = soil desiccation pilot testing</p> <p>SGE = surface geophysical exploration</p>						

Table 9-2. Characterization Boreholes and Direct Push Technology Installation, CY 2009.

Project/Location	Well ID	Drilled Depth (ft bgs)	Project/Location	Well ID	Drilled Depth (ft-bgs)
B/C Cribs	C7056	65.4	LLBG	C7245	21.9
B/C Cribs	C7057	64.6	LLBG	C7246	21.9
B/C Cribs	C7058	68.2	LLBG	C7247	26.5
B/C Cribs	C7059	65.1	LLBG	C7248	27.0
B/C Cribs	C7060	70.7	LLBG	C7249	27.0
200 North Area	C7474	16.0	LLBG	C7250	27.0
200 North Area	C7475	15.5	LLBG	C7251	12.5
200 North Area	C7493	15.5	LLBG	C7252	12.5
LLBG	C7202	12.5	LLBG	C7253	12.5
LLBG	C7204	12.5	LLBG	C7254	12.5
LLBG	C7205	12.5	LLBG	C7255	12.5
LLBG	C7206	12.5	LLBG	C7256	12.5
LLBG	C7207	12.5	LLBG	C7257	12.5
LLBG	C7208	12.5	LLBG	C7258	12.5
LLBG	C7209	12.5	LLBG	C7259	12.5
LLBG	C7210	12.5	LLBG	C7260	12.5
LLBG	C7211	12.5	LLBG	C7261	12.5
LLBG	C7212	12.5	LLBG	C7262	12.5
LLBG	C7213	12.5	LLBG	C7263	12.5
LLBG	C7214	12.5	LLBG	C7264	12.5
LLBG	C7215	12.5	LLBG	C7265	12.5
LLBG	C7216	12.5	LLBG	C7266	13.7
LLBG	C7217	12.5	LLBG	C7267	12.5
LLBG	C7218	12.5	LLBG	C7268	12.5
LLBG	C7219	12.5	LLBG	C7269	12.5
LLBG	C7220	12.5	LLBG	C7270	12.5
LLBG	C7221	21.9	LLBG	C7271	12.5
LLBG	C7222	21.9	LLBG	C7272	12.5
LLBG	C7223	21.9	LLBG	C7273	12.5
LLBG	C7224	21.9	LLBG	C7274	12.5
LLBG	C7226	12.5	LLBG	C7275	12.5
LLBG	C7227	12.5	LLBG	C7276	12.5
LLBG	C7228	12.5	LLBG	C7277	12.5
LLBG	C7230	12.5	LLBG	C7278	12.5
LLBG	C7231	12.5	LLBG	C7279	12.5
LLBG	C7232	12.5	LLBG	C7280	12.5
LLBG	C7233	12.5	LLBG	C7281	13.7
LLBG	C7234	12.5	LLBG	C7282	32.7
LLBG	C7235	12.5	LLBG	C7283	32.7
LLBG	C7236	12.5	LLBG	C7284	32.7
LLBG	C7237	12.5	LLBG	C7285	32.7
LLBG	C7238	12.5	LLBG	C7286	32.7
LLBG	C7239	12.5	LLBG	C7287	35.2
LLBG	C7240	12.5	LLBG	C7288	35.2
LLBG	C7241	12.5	LLBG	C7289	32.7
LLBG	C7242	12.5	LLBG	C7290	32.7
LLBG	C7243	12.5	LLBG	C7291	32.7
LLBG	C7244	12.5			

Notes:

bgs = below ground surface
ID = identification
LLBG = Low-Level Burial Grounds

Table 9-3. Well Maintenance Summary, Calendar Year 2009.

Well Name	Well ID	Field Order Number	Program	Well Name	Well ID	Field Order Number	Program
299-E26-8	A4805	WMO-NR-2009-3-084	RCRA	C6842	C6842	WMO-NR-2009-2-063	CERCLA
299-E26-10	A4799	WMO-NR-2009-2-053	RCRA	C6843	C6843	WMO-NR-2009-2-065	CERCLA
299-E26-77	C6455	WMO-NR-2009-2-054	RCRA	C6844	C6844	WMO-NR-2009-2-064	CERCLA
299-E26-79	C6826	WMO-NR-2009-2-055	RCRA	299-W7-7	A5013	WMO-NR-2009-3-011	RCRA
299-E27-5	A6672	WMO-NR-2009-3-031	RCRA	299-W10-1	A7136	WMO-NR-2009-2-006	CERCLA
299-E27-5	A6672	WMO-NR-2009-4-017	RCRA	299-W10-5	A4898	WMO-NR-2009-4-011	RCRA
299-E27-8	A4817	WMO-NR-2009-3-018	RCRA	299-W10-5	A4898	WMO-NR-2009-3-076	RCRA
299-E27-9	A4818	WMO-NR-2009-3-019	RCRA	299-W10-10	A4887	WMO-NR-2009-2-016	OTHER
299-E27-17	A4815	WMO-NR-2009-3-017	RCRA	299-W10-20	A5439	WMO-NR-2009-3-01200	RCRA
299-E27-18	A6674	WMO-NR-2009-3-030	RCRA	299-W10-23	B8545	WMO-NR-2009-2-056	RCRA
299-E28-5	A6787	WMO-NR-2009-1-086	CERCLA	299-W10-24	B8546	WMO-NR-2009-4-056	OTHER
299-E33-4	A4865	WMO-NR-2009-3-083	RCRA	299-W10-31	C5194	WMO-NR-2009-3-027	RCRA
299-E33-14	A4841	WMO-NR-2009-3-020	RCRA	299-W11-10	A4901	WMO-NR-2009-4-032	RCRA
299-E33-18	A4844	WMO-NR-2009-2-015	CERCLA	299-W11-12	A4902	WMO-NR-2009-4-021	RCRA
299-E33-18	A4844	WMO-NR-2009-1-089	CERCLA	299-W11-33P	B2401	WMO-NR-2009-1-004	CERCLA
299-E33-20	A4847	WMO-NR-2009-4-044	OTHER	299-W11-33Q	B2402	WMO-NR-2009-1-005	CERCLA
299-E33-31	A4856	WMO-NR-2009-4-033	RCRA	299-W11-34P	B2403	WMO-NR-2009-1-003	CERCLA
299-E33-37	A4862	WMO-NR-2009-3-021	RCRA	299-W11-34P	B2403	WMO-NR-2009-1-009	CERCLA
299-E33-47	C4259	WMO-NR-2009-4-007	RCRA	299-W11-34Q	B2404	WMO-NR-2009-1-006	CERCLA
299-E33-334	B8810	WMO-NR-2009-3-064	OTHER	299-W11-41	C3119	WMO-NR-2009-1-011	CERCLA
299-E33-334	B8810	WMO-NR-2009-2-023	RCRA	299-W11-42	C3242	WMO-NR-2009-3-036	RCRA
299-E33-340	C5853	WMO-NR-2009-1-013	CERCLA	299-W11-43	C4694	WMO-NR-2009-2-039	CERCLA
299-E33-344	C5859	WMO-NR-2009-3-069	CERCLA	299-W11-45	C4948	WMO-NR-2009-2-000	CERCLA
299-E34-2	A4877	WMO-NR-2009-3-023	RCRA	299-W11-47	C4990	WMO-NR-2009-1-012	CERCLA
299-E34-9	A4884	WMO-NR-2009-3-024	RCRA	299-W14-5	A5475	WMO-NR-2009-3-008	RCRA
299-E34-10	A4875	WMO-NR-2009-3-022	RCRA	299-W14-11	C4668	WMO-NR-2009-1-015	RCRA
699-52-55	C5861	WMO-NR-2009-1-088	CERCLA	299-W14-16	C3120	WMO-NR-2009-4-018	RCRA
699-53-35	A5238	WMO-NR-2009-4-042	OTHER	299-W14-16	C3120	WMO-NR-2009-1-090	CERCLA
699-53-35	A5238	WMO-NR-2009-4-043	OTHER	299-W14-16	C3120	WMO-NR-2009-1-016	CERCLA
699-53-47A	A5239	WMO-NR-2009-3-073	RCRA	299-W14-72	C5103	WMO-NR-2009-2-012	OTHER
699-54-45B	A8862	WMO-NR-2009-3-095	RCRA	299-W15-2	A5466	WMO-NR-2009-4-041	RCRA
699-54-45B	A8862	WMO-NR-2009-4-037	RCRA	299-W15-8	A5468	WMO-NR-2009-2-045	OTHER
699-55-57	A5259	WMO-NR-2009-3-059	RCRA	299-W15-9	A5477	WMO-NR-2009-2-043	OTHER
699-66-64	A5310	WMO-NR-2009-1-078	CERCLA	299-W15-11	A5474	WMO-NR-2009-4-061	OTHER
699-67-51	A5312	WMO-NR-2009-1-051	CERCLA	299-W15-30	B2410	WMO-NR-2009-4-057	OTHER
299-E13-14	A4726	WMO-NR-2009-1-068	CERCLA	299-W15-31A	B2471	WMO-NR-2009-4-055	OTHER
299-E17-1	A4728	WMO-NR-2009-1-007	CERCLA	299-W15-33	B2643	WMO-NR-2009-4-054	OTHER
299-E17-25	C3926	WMO-NR-2009-3-026	RCRA	299-W15-37	B2753	WMO-NR-2009-2-026	RCRA
299-E17-25	C3926	WMO-NR-2009-4-019	RCRA	299-W15-38	B2754	WMO-NR-2009-3-009	RCRA
299-E17-26	C4648	WMO-NR-2009-4-006	RCRA	299-W15-38	B2754	WMO-NR-2009-2-037	CERCLA
299-E24-5	A5899	WMO-NR-2009-3-061	RCRA	299-W15-39	B2755	WMO-NR-2009-3-010	RCRA
299-E24-8	A4758	WMO-NR-2009-3-015	RCRA	299-W15-44	C3956	WMO-NR-2009-3-063	OTHER
299-E24-24	C4647	WMO-NR-2009-3-028	RCRA	299-W15-45	C4119	WMO-NR-2009-4-059	OTHER
299-E24-24	C4647	WMO-NR-2009-2-017	CERCLA	299-W15-49	C4301	WMO-NR-2009-2-011	OTHER
299-E25-19	A4765	WMO-NR-2009-4-013	RCRA	299-W15-49	C4301	WMO-NR-2009-3-070	OTHER
299-E25-21	A4768	WMO-NR-2009-3-075	RCRA	299-W15-216	A7514	WMO-NR-2009-2-046	OTHER
299-E25-23	A6033	WMO-NR-2009-3-074	RCRA	299-W15-218	A7516	WMO-NR-2009-2-044	OTHER
299-E25-29P	A4774	WMO-NR-2009-4-035	RCRA	299-W15-219	A7517	WMO-NR-2009-2-047	OTHER
299-E25-29Q	A4775	WMO-NR-2009-4-045	RCRA	299-W15-220	A7518	WMO-NR-2009-2-048	OTHER
299-E25-47	A4794	WMO-NR-2009-4-012	RCRA	299-W15-224	C4986	WMO-NR-2009-2-040	RCRA

Table 9-3. (cont.)

Well Name	Well ID	Field Order Number	Program	Well Name	Well ID	Field Order Number	Program
299-E26-4	A4804	WMO-NR-2009-3-016	RCRA	299-W15-224	C4986	WMO-NR-2009-2-018	RCRA
299-E26-4	A4804	WMO-NR-2009-2-005	CERCLA	299-W15-224	C4986	WMO-NR-2009-4-027	RCRA
699-2-6A	B8077	WMO-NR-2009-1-053	CERCLA	299-W18-21	A4933	WMO-NR-2009-3-094	RCRA
699-18-21	A8376	WMO-NR-2009-1-084	CERCLA	299-W18-30	A4942	WMO-NR-2009-2-007	RCRA
699-20-39P	A9608	WMO-NR-2009-4-024	RCRA	299-W18-246	A7726	WMO-NR-2009-2-049	OTHER
699-20-41P	A5082	WMO-NR-2009-3-004	RCRA	299-W18-247	A7727	WMO-NR-2009-2-050	OTHER
699-20-41Q	A5083	WMO-NR-2009-3-006	RCRA	299-W18-252	A7732	WMO-NR-2009-2-051	OTHER
699-20-41R	A5084	WMO-NR-2009-3-005	RCRA	299-W18-253	C4965	WMO-NR-2009-1-000	CERCLA
699-26-35A	A5103	WMO-NR-2009-1-072	CERCLA	699-22-70P	A9480	WMO-NR-2009-3-003	RCRA
699-31-8	A8502	WMO-NR-2009-1-071	CERCLA	699-22-70Q	A9481	WMO-NR-2009-3-079	RCRA
699-34-39A	A5134	WMO-NR-2009-4-022	RCRA	699-26-89	A5108	WMO-NR-2009-2-031	RCRA
699-37-E1	A8587	WMO-NR-2009-1-073	CERCLA	699-36-93	A5145	WMO-NR-2009-3-025	RCRA
699-42-21	A8665	WMO-NR-2009-1-082	CERCLA	699-43-89	A5181	WMO-NR-2009-1-066	CERCLA
699-54-18D	A8858	WMO-NR-2009-3-066	RCRA	699-44-64	A5188	WMO-NR-2009-3-034	RCRA
699-S12-3	A5366	WMO-NR-2009-3-007	RCRA	699-45-69A	A5196	WMO-NR-2009-1-067	CERCLA
299-W19-34A	A9517	WMO-NR-2009-3-091	RCRA	699-47-80CT	A5209	WMO-NR-2009-4-023	RCRA
299-W19-35	A9515	WMO-NR-2009-4-029	OTHER	699-47-80CU	A5210	WMO-NR-2009-4-026	RCRA
299-W19-36	B2461	WMO-NR-2009-4-063	OTHER	699-47-80DP	A5211	WMO-NR-2009-4-025	RCRA
299-W19-39	B2460	WMO-NR-2009-4-062	OTHER	699-48-77D	A8775	WMO-NR-2009-1-062	OTHER
299-W19-45	C3394	WMO-NR-2009-2-009	RCRA	699-49-100C	A8804	WMO-NR-2009-4-058	OTHER
299-W19-101	C4966	WMO-NR-2009-2-038	CERCLA	699-49-100C	A8804	WMO-NR-2009-4-052	OTHER
299-W22-24P	A9568	WMO-NR-2009-3-092	RCRA	699-50-85	A5229	WMO-NR-2009-3-037	RCRA
299-W22-24R	A9570	WMO-NR-2009-3-088	RCRA	699-51-75P	A9730	WMO-NR-2009-2-024	RCRA
299-W22-24S	A9571	WMO-NR-2009-3-090	RCRA	699-55-76	A5261	WMO-NR-2009-3-033	RCRA
299-W22-24T	A9572	WMO-NR-2009-3-089	RCRA	699-55-89	A5262	WMO-NR-2009-3-032	RCRA
299-W22-47	C4667	WMO-NR-2009-3-071	OTHER	C5433	C5433	WMO-NR-2009-3-035	CERCLA
299-W22-82	C3124	WMO-NR-2009-1-087	CERCLA	C5434	C5434	WMO-NR-2009-3-038	
299-W22-82	C3124	WMO-NR-2009-2-010	RCRA	C5435	C5435	WMO-NR-2009-3-039	
699-19-58	A5076	WMO-NR-2009-4-002	RCRA	C5446	C5446	WMO-NR-2009-3-041	
699-29-70CQ	A5115	WMO-NR-2009-4-001	RCRA	C5447	C5447	WMO-NR-2009-3-042	
699-29-70CR	A5116	WMO-NR-2009-4-000	RCRA	C5448	C5448	WMO-NR-2009-3-040	
699-29-70CS	A5117	WMO-NR-2009-4-003	RCRA	C5449	C5449	WMO-NR-2009-3-043	
699-29-70CT	A5118	WMO-NR-2009-4-004	RCRA	C5450	C5450	WMO-NR-2009-3-044	
699-29-78	A5121	WMO-NR-2009-3-080	RCRA	C5451	C5451	WMO-NR-2009-3-045	
699-30-66	C4298	WMO-NR-2009-1-065	CERCLA	C5452	C5452	WMO-NR-2009-3-046	
699-33-74	C4973	WMO-NR-2009-1-056	CERCLA	C5453	C5453	WMO-NR-2009-3-047	
699-33-75	C4974	WMO-NR-2009-1-057	CERCLA	C5454	C5454	WMO-NR-2009-3-048	
699-33-76	C4976	WMO-NR-2009-1-058	CERCLA	C5455	C5455	WMO-NR-2009-3-049	
699-36-70B	C4299	WMO-NR-2009-1-059	CERCLA	C5458	C5458	WMO-NR-2009-3-050	
699-38-70B	C4236	WMO-NR-2009-1-060	CERCLA	C5459	C5459	WMO-NR-2009-3-051	
699-38-70C	C4256	WMO-NR-2009-1-061	CERCLA	C5460	C5460	WMO-NR-2009-3-052	
C6836	C6836	WMO-NR-2009-2-058	CERCLA	C5461	C5461	WMO-NR-2009-3-053	
C6837	C6837	WMO-NR-2009-2-059	CERCLA	C5462	C5462	WMO-NR-2009-3-054	
C6838	C6838	WMO-NR-2009-2-057	CERCLA	C5464	C5464	WMO-NR-2009-3-055	
C6839	C6839	WMO-NR-2009-2-060	CERCLA	C5479	C5479	WMO-NR-2009-3-056	
C6840	C6840	WMO-NR-2009-2-061	CERCLA	C5480	C5480	WMO-NR-2009-3-057	
C6841	C6841	WMO-NR-2009-2-062	CERCLA	C5481	C5481	WMO-NR-2009-3-058	

Figure 9-1. Categorization of Unique Well Identification Numbers.

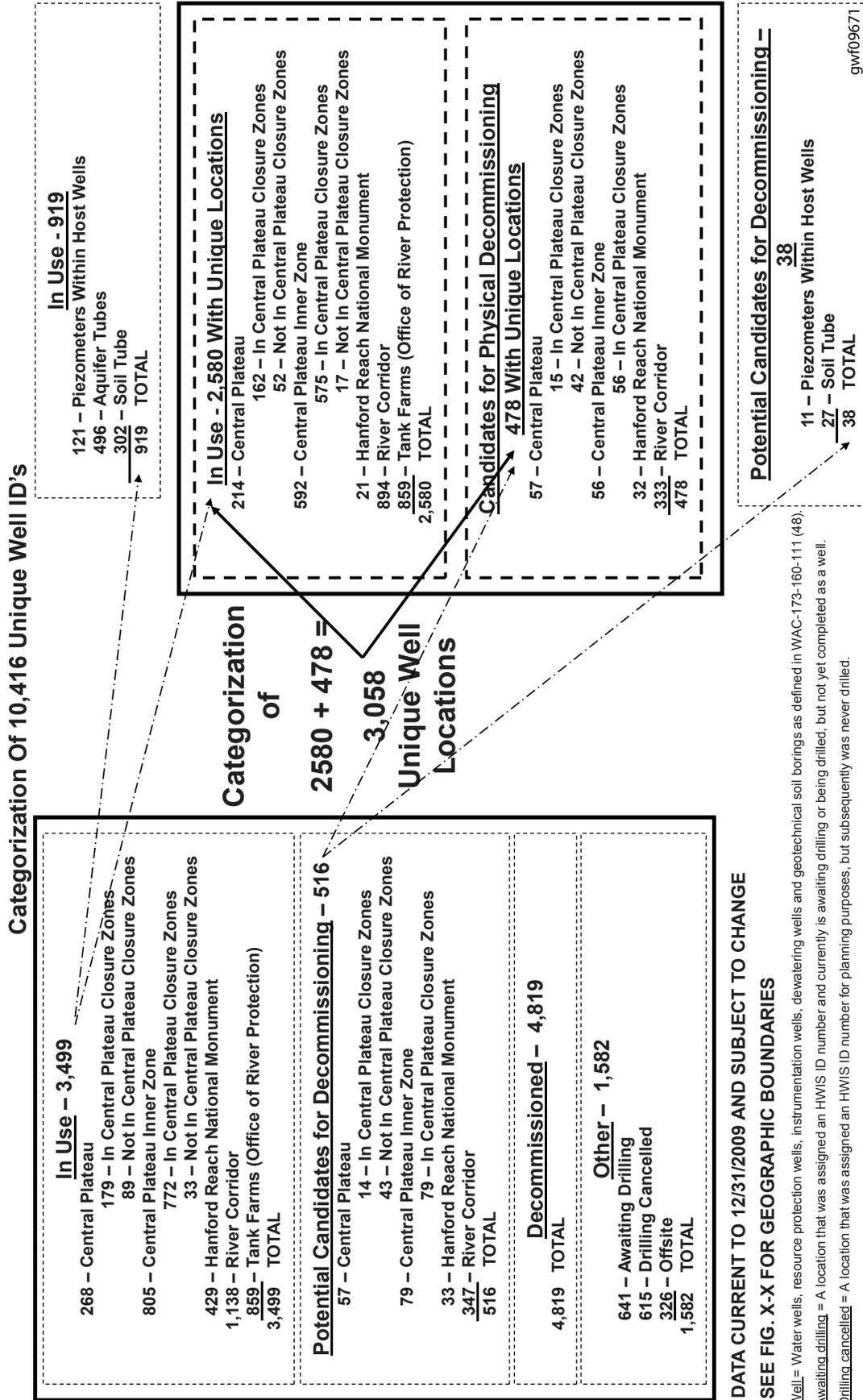


Figure 9-2. Hanford Site and Surrounding Area Depicting Various Geographic Regions.

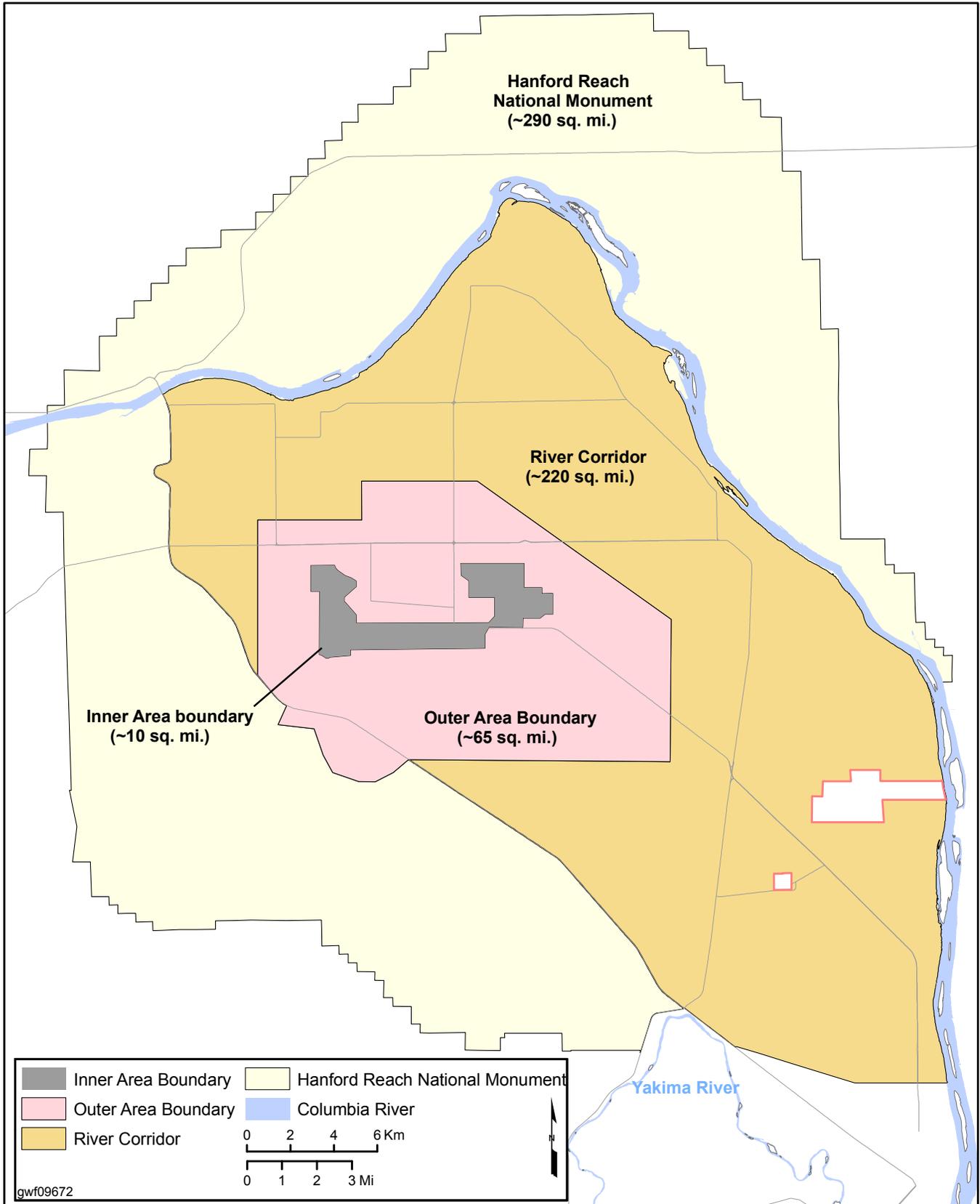
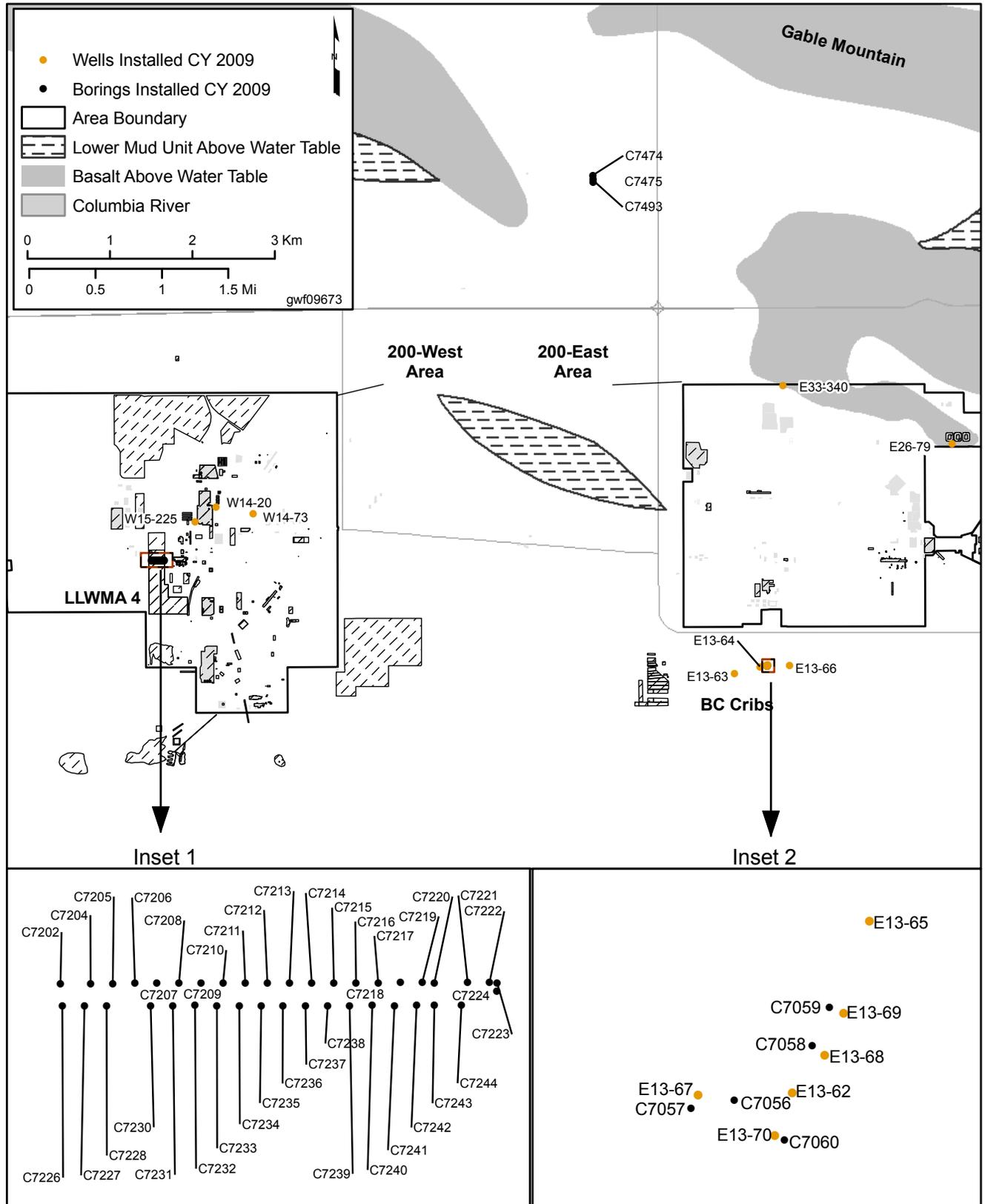


Figure 9-3. Well, Characterization Borehole, and Direct-Push Technology Installations for the Reporting Period.



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