|  |
| --- |
| **Color coding**: YELLOW/**BOLD** - required field; **GREEN** - required geographic position info; **BLUE/BOLD** - required for wells |

| Col-umn | Title | Definition | Requirementsand Format | Valid Values | Examplesand Comments |
| --- | --- | --- | --- | --- | --- |
| **A** | Location ID | UNIQUE ID to identify the field location in EIM. | **REQUIRED.** 15 alpha/numeric. Free text. |  | This ID will also go in Column B of the Results spreadsheet. Do not include depth information in this ID.Use a consistent naming convention. Facility/Site IDs, VCP numbers, etc. can be used as prefixes. Ex. For monitoring well MW4 at Voluntary Cleanup site NW0001, use VCNW0001\_MW4. Do NOT make it MW-4 – it is not unique. For wells, the Ecology Well Tag Number can also be used for the User Location ID (like ABC123). [See help document “Naming Monitoring Locations” for more information.](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_NamingLocations.pdf) |
| **B** | **Location Name** | UNIQUE descriptive name for a field location. | **REQUIRED.** 40 alpha/numeric. Free text. |  | Must be unique for each Location ID Ex. “Skagit River at I-5 bridge”“VCNW0001 MW4”“Walla Walla WWTP Outfall”For wells, the Ecology Well Tag Number can be used for the Location Name (like ABC123).[See help document “Naming Monitoring Locations” for more information.](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_NamingLocations.pdf) |
| **C** | **Location Setting**  | General physical setting of a field location. | **REQUIRED.** 30 alpha/numeric, valid values | **Air/Climate** atmospheric monitoring**Canal/Ditch** man-made channel for irrigation, hydropower, overflow, drainage etc**Estuary** area where fresh and salt water intermix, like bay, lagoon, etc**Estuary-Channel** channel bottom**Estuary-NonChannel** non-channel bottom**Intertidal** area between high and low tide extremes**Lake/Pond/Reservoir** inland water body, usually fresh**Land** on or below surface, including wells**Marine** area beyond the estuarial environment**Source-ManMade** industrial, agricultural, stormwater, or other discharge or lagoon**Spring** point where groundwater emerges to create surface water flow**Stream/River** channeled flowing water**Stream/River-Channel** channel bottom**Stream/River-NonChannel** non-channel bottom**Stream/River-Pool** pool bottom**Stream/River-Riffle** riffle bottom**Subtidal** area below low tide**Tunnel/Shaft/Mine** vertical/ horizontal subsurface passageway | Valid Values, cont.**Wetland** land that is periodically inundated by surface or ground water on an annual or seasonal basis**Other** use when none of the other categories fit**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****For most Wells, enter “Land.”** These are NOT regulatory definitions. |
| **D** | **Location Description** | Short narrative description of field location. Should be unique. | **REQUIRED.** 2000 alpha/numeric, free text |  | Ex. “200 yards north of the cattle crossing grating on Mackay Road, north of the intersection with Deerfield Road.”**Tip** – Include specific details that would help someone find your field location.  |
| E | Ecology Facility/Site ID | ID of facility or site where the field location exists, from Ecology 's Facility/Site database. | **REQUIRED for cleanup and permit sites** and/or if BK (Is Well Upgradient of a Facility/Site) is Y**.** 10 alpha/numeric, valid values | To find ID, go to [Facility/Site Database](http://www.ecy.wa.gov/fs/) or use EIM Map Identify tool. | Ex. 1529149, 4085 |
| **F** | Is Location a Well | Indicates the field location is a Well.  | **REQUIRED for WELLS**. 1 alpha/numeric, valid values | **Y** yes**N** no | **For Wells, enter “Y”** Additional data must be entered for a Well (AH-BM).Direct Push (like Geoprobe) that doesn’t leave a casing behind is not a well. |
| G | Address | Physical address of field location. Might not be the same as mailing address. | Optional. 200 alpha/numeric, free text |  | Ex. “424 128th Street NW” |
| H | City | City (or closest city) or area where field location exists. | Optional. 40 alpha/numeric, free text |  | Ex. “Seattle,” “Mt. Rainier National Park” |
| I | State | State or province where field location exists. | Optional. 2 alpha/numeric, valid values | **WA** Washington**OR**  Oregon**ID** Idaho**BC**  British Columbia |  |
| J | Zip Code | Zip Code or Canadian Postal Code of the field location’s physical address. | Optional. 10 alpha/numeric. Format: XXXXX or XXXXX-XXXX or XXX-XXX. |  | Ex. “98123-4567,” “V0B-1H0” |
| K | County | County where field location exists.  | Optional. 20 alpha/numeric, valid values | Must match existing county name | Ex. “Pierce” |
| L | NHD Reach Code | Identifies the waterbody or watercourse on which the field location exists per the National Hydrography Dataset. | **REQUIRED for streams, rivers, lakes, or nearshore locations.**14 numeric, valid values. | Use the NHD tool on the [EIM Map](https://fortress.wa.gov/ecy/eimreporting/search.asp) in Search to get the NHD Reach Code. | It’s important to associate your Location with the correct waterbody or watercourse. Some north Puget Sound locations don’t have Reach Codes.Ex. “17100103000305”See help document “[NHD Reach information from EIM Map Search](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_NHDReachCodeTool.pdf)” for NHD tool instructions. |
| M | NHD Reach Measure | Identifies where on a watercourse the field location exists per the National Hydrography Dataset. Percent distance from reach start. | **REQUIRED for stream or river locations.** Decimal, valid values | **0.000-100**  | It’s important to associate your Location with the correct watercourse for the 303(d) water quality assessment.Waterbodies like lakes don’t have Reach Measures.You can use the NHD tool on the [EIM Map](https://fortress.wa.gov/ecy/eimreporting/search.asp) to get the NHD Reach Measure.See help document “[NHD Reach information from EIM Map Search](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_NHDReachCodeTool.pdf)” for NHD tool instructions.Ex. “57.135” |
| **Horizontal Coordinates**Submit only ONE type of Coordinate System per location**No coordinates?** Get them from the EIM map. Find out how: [Lat/Long and Elevation Map Tool Instructions](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_LatLongAndElevationTool.pdf) |
| **N** | **Coordinate System** | Type of coordinates used to enter geographic position of field location into EIM.  | **REQUIRED.** 8 alpha/numeric, valid values | **LAT/LONG** Latitude/Longitude inDegrees-Minutes-SecondsORDecimal Degrees**SPCS** Washington State Plane Coordinate System**UTM** Universal Transverse Mercator | For LAT/LONG submitdeg-min-sec **-OR-** decimal degrees NOT BOTH |
| Fill out if you have **LAT/LONG Degrees-Minutes-Seconds** coordinates |
| O | Latitude Degrees  | Degrees measure of the field location's latitude.  | **REQUIRED for** **LAT/LONG in Deg-Min-Sec.** 2 numeric, valid values | **45** to **49** | Distance north of the equator. |
| P | Latitude Minutes | Minutes measure of the field location's latitude. | **REQUIRED for LAT/LONG in Deg-Min-Sec.** 2 numeric, valid values | **00** to **59** |  |
| Q | Latitude Seconds | Seconds measure of the field location's latitude. | **REQUIRED for LAT/LONG in Deg-Min-Sec.** Decimal, valid values | **00.00** to **59.99** |  |
| R | Longitude Degrees | Degrees measure of the field location's longitude.  | **REQUIRED for LAT/LONG in Deg-Min-Sec**. 3 numeric, valid values | **116** to **125** | Distance east or west of Central Meridian (Greenwich England). |
| S | Longitude Minutes | Minutes measure of the field location's longitude. | **REQUIRED for LAT/LONG in Deg-Min-Sec.** 2 numeric, valid values | **00** to **59** |  |
| T | Longitude Seconds | Seconds measure of the field location's longitude. | **REQUIRED for LAT/LONG in Deg-Min-Sec.** Decimal, valid values | **00.00** to **59.99** |  |
| Fill out if you have **LAT/LONG Decimal Degrees** coordinates |
| U | Latitude Decimal Degrees | Decimal degrees latitude coordinate for the field location. | **REQUIRED** **for LAT/LONG in Decimal Degrees.** Decimal, valid values | **45.000000** to **49.999999** |  |
| V | Longitude Decimal Degrees | Decimal degrees longitude coordinate for the field location. | **REQUIRED for LAT/LONG in Decimal Degrees.** Decimal, valid values | **116.000000** to **125.999999** or **-116.000000** to **-125.999999** |  |
| Fill out if you have **State Plane** coordinates |
| W | State Plane X Coordinate | State Plane Coordinate System E-W coordinate (X-axis) of the field location. In feet. | **REQUIRED for SPCS.** Decimal, valid values | North Zone: **602,913.0** to **2,673,266.0**South Zone: **575,078.0** to **2,618,128.0** |  |
| X | State Plane Y Coordinate | State Plane Coordinate System N-S coordinate (Y-axis) of the field location. In feet. | **REQUIRED for SPCS.** Decimal, valid values | North Zone: **-33,488.0** to **832,967.0**South Zone: **15,935.0** to **901,121.0** |
| Y | State Plane Zone | State Plane Coordinate System zone (north or south) of the field location. | **REQUIRED for SPCS.** 1 alpha/numeric, valid values | **N** North**S** South |
| Fill out if you have **Universal Transverse Mercator** coordinates |
| Z | UTM Easting | Universal Transverse Mercator easting coordinate (X-axis) of the field location. In meters. | **REQUIRED for UTM.** Decimal, valid values | Zone 10: **350,000.0** to **731,300.0**Zone 11: **271,250.0** to **518,176.0** |  |
| AA | UTM Northing | Universal Transverse Mercator northing coordinate (Y-axis) of the field location.  In meters. | **REQUIRED for UTM.** Decimal, valid values | Zone 10: **5,042,900.0** to **5,454,800.0**Zone 11: **5,042,930.0** to **5,454,795.0** |
| AB | UTM Zone  | Universal Transverse Mercator zone (10 or 11) of the field location. | **REQUIRED for UTM**. 2 numeric , valid values | **10****11** |
| **Horizontal Coordinate Metadata**(next 5 fields) |
| **AC** | Horizontal Coordinates Represent | General description of what the **coordinates** represent. | **REQUIRED.** 2 numeric, valid values | **24** Discrete monitoring point**25** Centroid of monitoring area**26** Stream segment, can include riparian zone**27** Transect, start point**28** Transect, center point**29** Transect, end point | For coordinates that do not represent a discrete monitoring point (valid values 25-29), use the Location Description field (Column D) to describe the monitoring area, stream segment, or transect where data were collected.Valid value 26 applies to a length of stream segment. Only use it when you are collecting data from multiple points within a stream segment and you want all those data to be associated with a single EIM location. It is mostly commonly used for habitat data. |
| **AD** | Horizontal Datum | Model used to project the horizontal position of the field location to a map. | **REQUIRED.** 2 numeric, valid values | **1** NAD27 **-** N. American Datum of 1927**2** NAD83 **-** N. American Datum of 1983**3** NAD83HARN - High Accuracy Reference Network**4** WGS84 **-** World Geodetic System of 1984 | Using GPS? Check unit settings for datum.Google Earth = WGS84EIM Map = NAD83HARN |
| **AE** | **Horizontal Coordinate Accuracy**  | Best estimate of horizontal coordinate accuracy for a field location. | **REQUIRED.** 2 numeric, valid values |  **1** ± 0.1 ft (0.03 m) **2** ± 1 ft (0.3 m) **3**  ± 3 ft (1 m) **4**  ± 10 ft (3 m) **5**  ± 20 ft (6 m) **6** ± 40 ft (12 m) **7**  ± 100 ft (30 m) **8** ± 180 ft (55 m) **9** ± 250 ft (76 m)**10** ± 500 ft (152 m)**11** ± 1000 ft or greater (300 m) |  |
| **AF** | **Horizontal Coordinate Collection Method** | Method used to collect the horizontal coordinates for a field location. | **REQUIRED.** 2 numeric, valid values | **4** Address matching - unspecified **8** Survey - conventional **13** Computer map (GIS-based, including EIM, Google Earth) **16**  GPS standard unit or unknown (code phase)**29**  GPS high-end consumer unit (DGPS or WAAS enabled)**15** GPS survey-grade unit (carrier phase)**17** GPS real time survey-grade (kinematic)**19** Paper map interpolation |  |
| AG | Paper Map Scale | Scale of the paper base map used to determine the geographic position of the field location. | **REQUIRED only for paper maps**. 2 numeric, valid values |  **2** 1:500,000 **3** 1:250,000 **4** 1:125,000 **5**  1:100,000 **6** 1:63,360 **7** 1:62,500 **8** 1:50,000 **9**  1:25,000**10** 1:24,000**11** 1:20,000**12**  1:15,840**13**  1:10,000**14** 1:12,000**15** 1:25,001-1:50,000**16** 1:50,001-1:100,000**17** 1:20,001-1:25,000**18** 1:15,001-1:20,000 **19**  1:10,001-1:15,000**20** 1:5,001-1:10,000**21** 1:501-1:5,000**22** =>1:500**23** <1:500 | **Only fill this out if column AF,** Horizontal Coordinate Collection Method**, is code 19, “**Paper map interpolation” |
| **The remaining fields are for WELLS**(and AH-AN for **marine and freshwater sediment locations** reporting elevation) |
| **Elevation and Metadata** |
| **AH** | Elevation of | Point at which the elevation at a field location was measured. | **REQUIRED for WELLS.** 50 alpha/numeric, valid values | **Land Surface****Top of Well Casing****Well Water Level Measuring Point****Sediment Surface** | Use “Well Water Level Measuring Point” only if your measuring point is not the top of casing (like an access port). |
| **AI** | Elevation | The distance of a field location above or below a vertical reference point. In feet or meters. | **REQUIRED for WELLS**. Decimal, valid values | **-9999999.999**  to**0000000.000**  to **9999999.999** | This is the elevation of the point specified in column AH (Elevation of).Marine and freshwater sediment surface (or mudline) elevations are measured relative to a reference point like mean sea level (field AN). They are often (but not always) negative values. Ex. “-7.2,” etc. |
| **AJ** | **Elevation Units** | Units in which the elevation of a field location is expressed. | **REQUIRED for WELLS.** 2 alpha/numeric, valid values | **FT** feet**M** meters |  |
| **AK** | **Elevation Datum** | Vertical reference point from which elevation was measured at a field location. | **REQUIRED for WELLS.** 2 numeric, valid values | **1**  NAVD88 -N. American Vertical Datum of 1988 | Using GPS? Check unit settings for datum.**As of 8/1/2013, you must convert your elevation data to NAVD88 if you used another datum, including local datums.** For assistance, see help document “[Converting Local Elevation Datums to NAVD88](http://www.ecy.wa.gov/eim/helpDocs/EIMHelp_ConvertingLocalDatumsToNAVD88.pdf).”If you are entering sediment elevations, contact your data coordinator.Google Earth = NAVD88EIM Map = NAVD88 |
| **AL** | **Elevation Accuracy** | Best estimate of elevation accuracy at a field location. | **REQUIRED for WELLS.** 2 numeric, valid values |  **1**  ± 0.1 ft (0.03 m) **2**  ± 1 ft (0.3 m) **3** ± 3 ft (1 m) **4**  ± 10 ft (3 m) **5**  ± 20 ft (6 m) **6** ± 40 ft (12 m) **7** ± 100 ft (30 m) **8** ± 180 ft (55 m) **9**  ± 250 ft (76 m)**10**  ± 500 ft (152 m)**11**  ± 1000 ft or greater (300m) |  |
| **AM** | **Elevation Collection Method** | The method used to measure elevation at a field location. | **REQUIRED for WELLS.** 2 numeric, valid values |  **2** Survey - conventional  **4**  GPS standard unit or unknown (code phase)**13** GPS high-end consumer unit (DGPS or WAAS enabled) **5** GPS survey-grade (carrier phase) **6** GPS real time survey-grade (kinematic) **3** Digital elevation model – WA 10 m**12** LIDAR (airborne laser)  **1** Bathymetric sounding**14** Meter wheel **8** Paper map interpolation  |   |
| AN | Sediment Elevation Reference | Reference point for the depth (elevation) of a marine or freshwater sediment field location. | **REQUIRED for marine or freshwater sediment locations with elevation specified in the Elevation field (AI).** 2 numeric, valid values | **1** Mean Sea Level (MSL)**2** Mean High Water (MHW)**3** Columbia River datum (CRD)**4** Lake Washington Ship Canal Datum (LWSC)**5** Mean Lower Low Water (MLLW)**6** Minimum Operating Pool (MOP) | **Do not fill this out unless the location is a sediment location (marine or freshwater).** |
| **Well Water Level Measuring Point and Metadata** |
|  Well with Casing Stickup | Flush-Mount Well |
| **AO** | **Well Water Level Measuring Point or TOC ID** | ID for the point on the well from which water levels are measured. Often top of well casing (TOC). | **REQUIRED for WELLS**. 8 alpha/numeric, valid values | **MP1** - measuring point - like an access port, **MP2** - use for a secondary measuring point,**TOC1** - use when you measure from top of casing,**TOC2** - use for a secondary measuring point at the top of casing or when the casing gets cut off | **If the top of casing gets cut off** or you have more than one measuring point**,** contact your EIM Data Coordinator for a new ID. |
| **AP** | **Well Water Level Measuring Point or TOC Description** | Description of the point on the well from which water levels are measured. Often top of well casing (TOC). | **REQUIRED for WELLS**. 40 alpha/numeric, free text |  | Ex. “Top of casing, notch on north side” |
| AQ | Well Water Level Measuring Point or TOC Height | Distance from the point where the water level was measured to the land surface. Often top of well casing (TOC). | **REQUIRED for wells if elevation is measured at land surface.**  Numeric |  | Often synonymous with “casing stickup.”Measuring points below land surface are reported as negative values. Ex. “2.8” (above ground),  “-0.5” (below ground)**NOT the well Elevation** – see the Elevation field (AI) for that. |
| AR | Well Water Level Measuring Point or TOC Height Units | Units in which the measuring point height is expressed.  | **REQUIRED for wells if Well Water Level Measuring Point or TOC Height is populated.** 2 alpha/numeric, valid values | **FT** feet**M** meters |  |
| AS | Well Water Level Measuring Point or TOC Start Date | Date on which the measuring point was first used. | Optional. Date MM/DD/YYYY |  | Ex. “3/15/1999” |
| **Well Details** |
| AT | Well Tag ID | The unique Washington State Department of Ecology Well Tag ID, consisting of three letters and three numbers (e.g. ABC123). The ID is stamped on an aluminum tag and typically affixed to the well by the driller at the time of construction or later by Ecology staff. The ID is also included on the well log submitted by the driller.  | **REQUIRED for wells if available**. 6 alpha/numeric, format ABC123 |  | This **must** be the unique number off the Washington State Department of Ecology well tag attached to a well. If a well is not tagged, tags are available from Ecology. Because it is unique and recognized throughout Washington, the Well Tag ID is often used in EIM as the Location ID and the Location Name.**If you don’t have a valid well tag ID and it is not practical to get one, leave this field blank.** |
| AU | Well Owner Organization Name | The organization name of the well owner.  | **REQUIRED for wells if available.** 50 alpha/numeric, free text |  | Ex. “City of Olympia “ or “Greenfields Farms” This information is not made public. |
| AV | Well Owner Last Name | The last name of the well owner.  | **REQUIRED for wells if available.** 50 alpha/numeric, free text |  | Ex. “Jones.” This information is not made public. |
| AW | Well Owner First Name | The first name of the well owner.  | **REQUIRED for wells if available.** 50 alpha/numeric, free text |  | Ex. “John.” This information is not made public. |
| **AX** | Groundwater Location Type | The primary use or type of well or monitoring location. | **REQUIRED for WELLS**. 30 alpha/numeric, valid values  | **Cistern** **Dewatering Well** **Geothermal Well** **In-Water Piezometer** **Injection Well - ASR** **Injection Well - Carbon Sequestration** **Injection Well - Remediation** **Irrigation Well** **Monitoring Well** **Oil and Gas Well** **Pumping Well - Remediation** **Spring/Seep****Stockwater Well** **Tile Drain** **Water Supply Well - Domestic** **Water Supply Well - Industrial** **Water Supply Well - Public****Other**  |  |
| **AY** | Well Completion Depth | The depth of the completed well **below land surface**. In feet or meters. | **REQUIRED for WELLS**. Decimal |  | Usually found on the well log.Ex. “48.84” |
| **AZ** | **Well Completion Depth Units** | Units in which Well Completion Depth is expressed.  | **REQUIRED for WELLS**. 2 alpha/numeric, valid values | **FT** feet **M** meters |  |
| **BA** | **Well Completion Type** | The type of completion or nature of the openings that allow water to enter the well. | **REQUIRED for WELLS.** 30 alpha/numeric, valid values | **Cased, Open Interval****Uncased, Open Interval****Cased, Open-Ended****Other** | Well screen? Use “Cased, Open Interval”If “Other” explain the Completion Type in the Well Construction Comment (BJ) |
| BB | Well Open Interval Upper Depth | Distance from **land surface** to the top of the Well open interval. Includes screens, perforations, etc.In feet or meters. | **REQUIRED for wells if known and Well Completion Type is Open Interval.** Decimal |  | 20Usually depth to top of well screen. To include more information about this, use Well Construction Comment. |
| BC | Well Open Interval Lower Depth | Distance from **land surface** to the bottom of the well open interval. Includes screens, perforations, etc.In feet or meters. | **REQUIRED for wells if known and Well Completion Type is Open Interval.** Decimal |  | Usually depth to bottom of well screen. To include more information about this, use Well Construction Comment. |
| BD | Well Open Interval Units | Units in which the Well Open Interval Upper and Lower Depth is expressed.  | **REQUIRED for wells if Open Interval Upper or Lower Depth is populated.** 2 alpha/numeric, valid values | **FT** feet**M** meters |  |
| BE | Well Maximum Casing Diameter | The inner diameter of the outermost permanent casing used to complete the well.In centimeters or inches.  | Optional. Decimal |  | For above-ground monitoring well completions, report the inner diameter of the well itself and not that of the outer protective casing.Ex. “2.00” |
| BF | Well Maximum Casing Diameter Units | Units in which Well Maximum Casing Diameter is expressed.  | **REQUIRED for wells if Well Maximum Casing Diameter is populated.** 2 alpha/numeric, valid values | **CM** centimeters**IN** inches |  |
| BG | Well Casing Material | Material from which the well casing is made. | Optional.15 alpha/numeric, valid values | **Concrete****Iron****Plastic, other** **PTFE/Teflon****PVC** **Steel, other****Steel, Stainless****Other** |  |
| BH | Well Construction End Date | Date that well construction was completed.  | **REQUIRED for wells if available.** Date: MM/DD/YYYY |  | Ex. “01/01/2000” |
| BI | Well Construction Method | The method used to create the borehole and construct the well. | **REQUIRED for wells if available.** 2 alpha/numeric, valid values | **AP** air percussion**AR**  air rotary**BA**  bored / augered**CT** cable tool**DR** driven / direct push**DU** dug**HR**  hydraulic / mud rotary**JE**  jetted**RR** reverse circulation rotary**SO**  sonic |   |
| BJ | Well Construction Comment | Comments or other important information about the construction of a well. | Optional. 2000 alpha/numeric, free text |  | Well constructed by owner-depth unknown; Log available, deepened from 180 to 263 ft |
| BK | Is Well Upgradient of a Facility/Site | Indicates a well that is used to represent upgradient conditions at a particular facility or site, and is (known or assumed to be) unaffected by that site. Doesn’t necessarily reflect "pristine" or "natural" conditions. | Optional. 1 alpha/numeric, valid values | **Y** yes **N** no | Ecology Facility/Site ID is required if populated "Y" |
| BL | ~~Aquifer Test Conducted~~Aquifer Test Report in EIM  | Indicates that an aquifer or pumping test report prepared by a hydrogeologist or engineer has been uploaded to EIM.  | **This field is now for internal use only. Leave it blank.**  | Leave this field blank. | If you have an aquifer test report you would like uploaded to EIM, contact your EIM Data Coordinator.Not for short-term bailer or air lift tests performed by the driller during well construction or development. |
| BM | Naturally Flowing Well | Indicates whether an uncapped well would naturally flow due to artesian pressure. | **REQUIRED for wells if well is naturally flowing.**1 alpha/numeric, valid values | **Y** yes **N** no |  |