Forest Service Handbook
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Forest Service Handbook 7409.11 – Sanitary Engineering and Public Health Handbook

Chapter 90 - Records and Reports

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90.2 - Objectives

The objectives of the records and reports used in water supply, wastewater, and solid-waste systems are a combination of meeting internal and external reporting requirements, for documentation, for utilization in planning, programing, and budgetary processes, and for use as administrative tools. The purpose of this chapter is to consolidate the instructions for current reporting requirements.

90.8 - References

See FSM 7410, 7420, and 7460; also OMB circular A-106 dated December 31, 1974.

91 - Water Systems

91.1 - Potable Water Supply Inventory

All potable water supplies are reported on the computer-based Form 7400-2, Potable Water Supply Inventory.

91.11 - Instructions for Completing Form 7400-2, Potable Water Supply Inventory

Inventory forms are to be completed on all potable water systems provided for Forest users and/or personnel. This form will also be used to report all natural swimming water sites (FSM 2542.2). Inventories will include sites served by municipal water systems (block 19), but not include special use systems, unless they also serve a Forest Service site or individual Regional instructions require it.

Many systems will have unique features which cannot be completely coded or entered into the computer. However, these features should be noted directly beneath the applicable block for future reference. In this respect, entries noted as "Other" may be accompanied by an explanation.

The numbers listed in the following outline correspond to block numbers on form 7400-2:

1. Enter two digits for the Region or Station number.

2. Enter two digits for the Forest number, or, for stations, the project number. If none, enter two zeros.

3. Enter two digits for the Ranger District (or comparable area) number. If none, enter two zeros.

4. Assign each potable water supply and natural swimming water site a project number. When a supply or site has been assigned a number on Form 7400-1, Water Pollution Abatement Project Inventory, under the Forest Service Potable Water Systems Program, it is preferable to use that number. Otherwise, use the RIM, dam inventory,

administrative site, etc., number as appropriate (block 5). If a number, such as RIM, exceeds seven digits, enter the last seven digits. For Stations, the number entered in block 4 may be identical to that in block 2, except it cannot be all zeros.

When two or more systems serve one site, complete a separate inventory form for each system and assign them separate consecutive numbers. In the case of more than one hand pump serving a site, complete an inventory form for each pump and note the appropriate information in block 13, such as "Happy Campground East Well" or "Happy Campground West Well."

When two or more sites are served by the same system, do not report the system more than once. Where several RIM and/or administrative site numbers are available for a single system, consider using that number which repre- sents either predominant use or longest use period.

5. Enter the coded digit that best describes the number used in block 4.

6. Enter the numerical watershed code in accordance with FSM 2573. Note that this block is left-alined; not right-alined as are all others.

7. Enter the State number per Federal Information Processing Standards (FIPS) 5.1.

8. Enter the county number per FIPS 6.1.

9. Enter the congressional district number per FIPS 9.

10. Enter the last two digits of the fiscal year this form is completed or modified.

11. Self-explanatory. For water systems, enter location of site(s) served by system; not source of water supply.

12. Self-explanatory. For water systems, enter location of site(s) served by system; not source of water supply.

13. Enter the site name in no more than 30 letters, numerals, and spaces. Do not enter punctuation, hyphens, etc. Enter complete identifying information, such as "Big Bar RS and Happy CG," "Happy CG Swimming Area," or "Smokey RS West System."

If a more complete description of a system or the site(s) it serves is deemed necessary, if the site is served by more than one system and if noting this is desirable, or if some other descriptive language is deemed necessary, write it in below the site name entry. Such information will not be entered into the computer inventory system, but by retaining the com- pleted form 7400-2 in Forest Service records, the information will be available.

14. Enter the most appropriate descriptive numerical code for the system inventoried. When the inventory is being established for a natural swimming water site, the numeral "8" must be entered. Where an area has both a potable water supply and a natural swimming water site (FSM 2542.2) to be reported, a separate inventory form must be completed for each.

15. (FSM 7421.23.) This block, and blocks 16 and 17 must be completed for all sites and/or systems reported. Entries in blocks 15, 16, and 17 are used to determine site sampling frequency for potable water systems.

Due to changes in primary drinking water regulations under the Safe Drinking Water Act, the block 15 entry will reflect "AVERAGE DAILY POPULATION" (average daily use) at a site instead of "People Use Days."

For recreation sites, average daily population may be determined by using a percent of use efficiency as shown in the following example, or by dividing the actual number of people using a site during an annual or calendar-year, use season by the number of days in that season (block 16). The percent of use efficiency should be determined by either using available records of use at individual sites or estimating it.

Example: Site XYZ has a PAOT of 100. Past use records indicate a site use efficiency over the annual use season of approximately 40 percent.

Then, "Average Daily Population"=(100)(0.40)=40. Enter 000040 in Block 15.

When reporting a water system which serves more than one site or more than one type of site, determine the average daily population figure of the individual sites and then combine those figures for entry in block 15. If this is the situation for only part of each year, as in the case of a year-round administrative site and a seasonal campground sharing one water system, the combined average daily population figure should reflect average heavy use season capacity for both sites.

Information represented in block 15 is not related to "Visitor Day" data from RIM, but must instead reflect actual visits to a site; for example, 50 persons visiting a picnic area for some period in any one day represent a population figure of 50, whether using the site for 1 hour, 2 hours, 10 hours, or longer. Those same 50 people in a campground for 3 days still represent a population figure of 50.

16. Enter the number of days in the average period of time a site is utilized. For sites open year-round, enter 365.

Block 16 should reflect the longest use period for those systems serving more than one site.

17. Enter PAOT for the site. PAOT for administrative sites should reflect average heavy use season capacity.

For natural swimming water sites, and for all sites and/or systems where PAOT does not apply or is not normally reported, enter 9999 in block 17.

18. Self-explanatory for potable water systems. For natural swimming water sites, enter "n", unless the site at times is not suitable for swimming, such as at a reservoir that is often drawn down to some unsuitable water-surface elevation.

19. Self-explanatory for potable water systems. For natural swimming sites, use the numerical coding to identify the type of site, such as lake, river, or impoundment.

20. Self-explanatory. Enter "0" for natural swimming water sites.

21. Self-explanatory.

22. Enter the year constructed or, when applicable, the year of any significant reconstruction. If unknown or if not applicable, such as a swimming site in a river, enter all zeros.

23-25. Self-explanaotry, If answer to block 24 or 25 is unknown, enter "0" in these blocks. For gravity water systems and for swim waters, enter all zeros.

There may be a pump in a potable water system that is not necessarily at a well or spring, such as a booster pump system. These blocks (23-25) should also be used to report such a pump, with an appropriate explanation written in below the block.

26-33. Self-explanatory.

The block 29 entry will be used to report "Disinfection" instead of just "Chlorination." The following entries should be used in block 29:

1=Automatic (as related to chlorination).
2=Manual (as related to chlorination).
3=None (no disinfection of any kind).
4=Iodine.
5=Ozone.
6=UV (ultraviolet).
7=Other.

Under the coding in block 33, enter a brief description of the other treatment.

34-39. Self-explanatory.

The person preparing the inventory form is to print his or her name in the space provided and enter the date the form was completed.

The original of the form is to be sent to the office where data entry to the computer will be made. The carbon copy should be retained at the originating office.

91.2 - Report of Bacteriological Test

Form 7400-4, Report of Bacteriological Test (ex. 1), will be used to record and report results of microbiological testing for coliform bacteria in potable water supplies. This form will also be used to report actions taken when maximum contaminant levels are exceeded and systems are not in compliance with regulations.

91.2 EXHIBIT 1 IS A SEPARATE DOCUMENT

91.21 - Instructions for Completing Form 7400-4, Report of Bacteriological Test

The purpose of this form is to record test results for a single site/system for a use season and/or a calendar year. Start a new form at the beginning of each year or season and use an additional form if more than 12 tests are taken in a year. Sampling dates must be listed in chronological order.

The original 7400-4 form will be maintained at the operating level of the organization, either at the individual system site and/or District Office. A copy of the form will be used as a turnaround document for reporting results of current testing. This copy will be sent to the office where data entry to the computer will be made in accordance with established frequency reporting requirements. A format for procedures to prevent duplicate keypunch records during updating should be developed at the Regional level.

Form 7400-4 will also serve as an aid to field personnel in reviewing site testing results.

Refer to FSM7421.24 for potable water system testing requirements and FSM 2542.24, for swim water testing. Form 7400-4 and the computerized bacteriological monitoring program will <u>not</u> be used for swim water tests. For potable water system testing, sampling frequency requirements are based on calendar months. Generally, two samples are necessary in the initial month to satisfy the requirement for one sample prior to opening a seasonally operated site. For example, if a site requires one potable water sample per month during the use period, and the first sample for the season is collected on April 15 and the system is opened for use on April 20, one additional sample must be taken before April 30 to satisfy sampling requirements. An exception to this would be a system where a sample was taken at the end of 1 month, but the system was not opened until the beginning of the following month. While this situation may occur, it should not be planned simply to avoid taking two samples in the opening month of use.

Subsequent samples taken on a once-a-month basis could allow up to 60-day intervals between tests. It is anticipated, however, that samples will be taken as near to 30-day intervals as practical.

The numbers listed refer to corresponding column numbers on form 7400-4.

Column numbers

1-16 This information must be identical to that entered on form 7400-2 for each site and/or system.

17-22 Data sample is collected at the site. Enter in the sequence shown (year/month/ date).

23-26 Time sample is collected at the site. Enter as military time. Also enter different times when more than one sample is taken in any 1 day at any one site.

27 SAMPLE TYPE

First-1. This identifies the first sample taken in a calendar year for a potable system. The entry 1 will only be used once each year for a potable water system. This first sample corresponds to a sample as defined in the NIPDWR and will not be used in determining compliance with maximum contaminant level (MCL's) or frequency rate.

Regular-2. For water systems, this identifies any regular sample taken after the first sample, but prior to the last sample of the season (calendar year). This regular sample corresponds to a distribution designation as noted in the NIPDWR.

Final-3. For water systems, this identifies the last sample taken in a use season and/or calendar year. The NIPDWR do not recognize seasonal use water systems. Consequently, there is no corresponding sample type for a final sample in the regulations. However, for purposes of conformity, a final sample will be treated as a regular sample in that it will be used in determining compliance with MCL's or frequency use.

Column numbers

Resample-4. This identifies a resample taken because previous samples have placed the system in a questionable or unsatisfactory category as described by conditions 2/, 3/, and/or 4/ in table 1 FSM 7421.26. This entry is used for potable water systems only.

This resample corresponds to a check sample as defined in the NIPDWR and is not considered in determining compliance with MCL's or frequency rate.

For potable water systems when more than one sample is taken in any single day and one of those samples is the first sample for the site (a number 1 entry), ensure the sample taken at the earliest time of day is designated the number 1 sample.

It is recognized that seasonal sampling at some potable water systems and/or some sites may be discontinued during the resampling phase if the source of contamination cannot be readily identified or funds are not available to correct the problem. While every attempt should be made to obtain two consecutive daily satisfactory tests (as noted in table 1, FSM 7421.26) prior to closing a system in the resample phase, this may not always be practical. The value of requiring additional resamples after a potable water system has been closed for the seasonal-use period is questionable. Normally, water systems are cleaned, flushed, and disinfected after a nonuse period, and an initial satisfactory test result is required prior to opening the system for use.

Thus, if an unsatisfactory test result is received for a sample that would normally be considered the final sample for the season, the requirement for two

Column numbers	
	consecutive daily resamples containing no positive portions or colonies, prior to closing the system, is not mandatory. Two consecutive daily resamples containing no positive portions or colonies, prior to continuing a regular sampling schedule, is a mandatory requirement.
28	Sample Size. This entry identifies the type and size of the individual test portion. It should not be confused with the size of the sample collected at the site. Generally, the sample bottle will be a minimum of 4 ounces or 100-plus milliliters. The sample is split into an appropriate test portion size for testing purposes. MTF refers to the multiple tube fermentation technique. Membrane refers to the membrane filter technique. For potable water, either of the 10 ml or 100 m test portion will be used for the MTF technique. Present standards require the use of 100 m test portion when the membrane filter technique is used. Entries will be either 1 or 2 related to test portion size when the MTF technique is used and 3 when the membrane technique is used. Results will be reported in the number of positive portions and/or the number of colonies per 100 m .
29	The entry is used to report test results when the MTF technique. Results are reported in number of positive portions.
30-32	This entry is used to report test results when the membrane technique is used. Results are reported in number of colonies per 100 m . For the purpose of comparing positive test results against table 1, FSM 7421.26, the same testing techniques and

Column numbers

portion size must be used throughout any one season of use (or any one calendar year). However, if a laboratory changes its testing technique, or uses a different test method for resample tests, or if it is necessary to change laboratories, subsequent test results and followup action can be related to the initial test method for comparison purposes in accordance with the following tabulation:

Initial Test results	Resample	Followup* action
(Positive portions) (5-10m)	(Colonies/100 m)	
None		1
1 or 2	None	1
	1 to 4	2
	5 or more	3
3 or more	None	3
	1 or more	4
(Colonies/100m)	(Positive portions) (5-10m)	
1 or less		1
2 to 4	None	1
	1 or 2	2
	3 or more	3
5 or more	None	3
	1 or more	4
(Positive portions) (5-100 m)	(Colonies/100m)	
None		1
1 to 4	None	1
	1 to 4	2
	5 or more	3
5	None	3
	1 or more	4

Initial Test results (Colonies/100 m)	Resample (Positive portions) (5-100 m)	Followup* action
1 or less		1
2 to 4	None	1
	1 to 4	2
	5	3
5 or more	None	3
	1 or more	4

* See table 1, FSM 7421.26, for followup action requirements.

Column numbers

Note that an 0 entry must be placed in whichever of the columns that is not applicable to the test result being reported. That is, if the membrane technique is used, an 0 entry would be shown in column 29, and/or if MTF is used, 3 zeros would be shown in columns 30-32.

Reporting in terms of MPN (most probable number), Coli Index, or indicated number should not be used for test results from finished water supplies.

Test results when using the membrane techniques are sometimes reported as too numerous to count (TNTC) or confluent growth. Results reported in this manner should be coded as 999 in columns 30-32 and required resampling and notifications undertaken.

33-37 This entry is used to identify the laboratory where testing is performed. The identification number will allow the surveillance agency to ensure that tests are being performed by a certified laboratory facility. This number will be assigned by EPA or the State.

Column numbers

38	This entry indicates the followup action taken as a result of site/system sampling. If sampling indicates a satisfactory condition or a condition that does not require site closure (conditions 1, 2, or 3, table 1 FSM 7421.26), the number 1 would be entered. If a site/system is closed, or the water system is shut off or otherwise taken out of use, because test samples have been unsatisfactory, then during the resampling phase the entry in column 38 would be a number 2 until such time as two consecutive satisfactory resamples are obtained and the system is reopened (entry number 3). During the resampling phase when a system is closed, the initial closure date will be shown.
39-44	Entries are used to indicate the date a site/ system is taken out of use and/or reopened to use (numbers 2 or 3 in column 38). For the first (type 1) and final (type 3) samples for seasonal systems, enter date system was actually opened for use by the public and date system was seasonally closed to all use. If no action is taken or none is required (entry 1 in column 38) report the identical data shown in columns 17-22.
45-48	Entries are used to indicate the time a site/system is taken out of use and/or reopened. For the first (type 1) and final (type 3) samples for seasonal systems, enter the time system was actually opened for use by the public and the time system was seasonally closed to all use. If no action is taken, show the identical time recorded in columns 23-26.
49	Entry indicates a potable water system (number 1).

Column numbers

50	Self-explanatory.
51	Self-explanatory. When a sanitary survey is performed, the date of the latest survey must be reported in block 39, form 7400-2, at the next inventory update.
52	This entry identifies the extent of notifications related to test results for the various categories of water systems. Code 1 will be used to indicate EPA/-State notifications for all public systems when a regular sample exceeds the maximum contaminant level (MCL) and a check sample confirms contamination even if the system is closed to public use. Code 2 will be used to indicate EPA/-State/public notifications for all public systems that are not closed to human consumption as required by action item 4, table 1, FSM 7421.26, and for nonpublic systems not closed to human consumption as required by action item 4, and public notification is necessary. Code 3 will be used to indicate the failure to make required notifications based on unsatisfactory test results. Code 4 will be used to indicate satisfactory test results when surveillance agency and/or public notification is not required. Sampler's name--that of the person who collected the sample. The sampler's name is not required for reporting purposes, but is required for recordkeeping for not less than 5 years.
53-80	Since there are only 28 character spaces on this form, as compared to 30 on the inventory form, abbreviations may be required to ensure that all

Column numbers

necessary identifier data is included. The monitoring program does not key on the site name. For example, campground (C.G.) and picnic ground (P.G.) can be used to provide adequate space for other specific identification data for a system.

Additional instructions concerning entry of data on the form appear on the back of form FS-7400-4.

91.3 - Form FS-7400-3, Potable Water Supply Turbidity Record

Form FS-7400-3 will be used to record and report results of turbidity testing (ex. 1). This form will also be used to report actions taken when the maximum contaminant level (MCL) is exceeded and systems are not in compliance with regulations.

91.3 – EXHIBIT 1 IS A SEPARATE DOCUMENT

91.31 - Instructions for Completing Form FS-7400-3, Potable Water Supply Turbidity Record

The purpose of form FS-7400-3 is to record turbidity test measurements for a single system for a 1-month period. Start a new form at the beginning of each month, and use an additional form if more than 31 tests are taken in a single month. Sampling dates must be listed in chronological order.

The original form FS-7400-3 shall be maintained at the operating level of the organization, either at the individual system, site, and/or the District office, for a minimum of 2 years. A copy of the form will be used for reporting results of current testing, and this copy will be transmitted directly either to the surveillance agancy or to the Regional Office, as determined by the Region.

1. Samples for turbidity measurements shall be taken for all public water systems which use water in whole or in part from surface sources. A minimum of one test per day is required anytime a system using a surface source is open to use. Samples shall be taken at representative entry point(s) to the water distribution system. Turbidity measurements shall be made, using the Nephelometric Method to determine compliance with the maximum contaminant level established by the NIPDWR and/or State standards.

2. Failure to perform any required monitoring must be reported to the State/EPA within 48 hours, and the public must be notified.

3. The required followup action shall be taken every time a daily turbidity sample is not collected and analyzed.

4. The block numbers in the following list correspond to block numbers on form FS-7400-3:

Block 1. Enter the date by month and year.

Blocks 2 thru 5. Self-explanatory.

Blocks 6 and 7. Enter site name and project number, as shown on inventory form FS-7400-2, Potable Water Supply Inventory.

Block 8. Enter one of the following categories as applicable to the system. See FSM 7420.5 for the definition of each category.

(a) Public community

(b) Public noncommunity

(c) Public semicommunity

(d) Nonpublic community

(e) Nonpublic noncommunity

States that have assumed primacy may establish their own category designations. In such cases, use the State definitions of categories, as applicable.

Block 9. Enter the name of the manufacturer of the turbidimeter used to measure turbidity.

Block 10. Enter the model number of the turbidimeter used in tests.

Block 11. Enter the day that turbidity test is made. A minimum of one turbidity measurement per day is required whenever the system is open for use.

Block 12. Enter the time and value of the daily turbidity test, using Military Time. Enter the value (turbidity test result) in Nephelometric Turbidity Units (NUT). Report turbidity readings in accordance with the following schedule:

Turbidity range NTU	Record to the nearest NTU
0 - 1.0	0.05
1 - 10	0.1
10 - 40	1
40 - 100	5

The maximum contaminant level (MCL) for turbidity is 1 NTU (an MCL up to 5 NTU may be established at State option). If the routine test result does not exceed the MCL, only routine recording is required.

Block 13. Enter the time and value of a check (resample) turbidity measurement. Enter time as Military Time. Enter the value in NTU. If the result of a routine turbidity test exceeds the MCL, a check sample must be taken as soon as practicable, and preferably within 1 hour. If the check sample does not exceed the MCL, only routine recording is required.

Block 14. Enter the value used for determining monthly average. Use value from routine samples on the days that the MCL was not exceeded and check sample value for the days on which the MCL was exceeded.

Block 15. Indicate by a YES (Y) or NO (N) if the MCL for daily turbidity monitoring was exceeded. If both the daily routine sample and the check sample exceeds the NCL, this must be reported to EPA/State within 48 hours.

Block 16. Enter the value used for determining the 2-day average. Use values from routine samples on the days that MCL was not exceeded, and check sample values for days that the MCL was exceeded, to calculate the 2-day average. This average is based on the results of samples taken on 2 consecutive days. If the average of two samples taken on consecutive days does not exceed 5 NTU, only routine recording is required.

Block 17. Indicate by a YES (Y) or NO (N) if the MCL for the 2-consecutive-day average was exceeded. If the average exceeds 5 NTU, this must be reported to EPA/State within 48 hours, and the public must be notified.

Block 18. Indicate by a YES (Y) or NO (N):

(a) If EPA/State notification is required.

(b) If the necessary notification was made. EPA/ State must be notified within 48 hours if the MCL for the daily turbidity monitoring and/or the 2-consecutive-day average is exceeded, as indicated in items 15 and 17.

(c) If public notification is required.

(d) If the public notification was made. The public must be notified if the MCL for the 2-consecutive-day average is exceeded, as indicated in item 17.

Block 19. If Forest Service personnel are analyzing samples, either with onsite turbidimeters or offsite laboratories, enter the name of the individual performing the turbidity tests. If testing is conducted at other than Forest Service facilities, enter the name of the laboratory conducting the test.

Block 20. Enter the monthly average turbidity value. Calculate this average by dividing the total value by the number of days in the test month. The total value is determined by adding values from the routine samples on those days that the MCL was not exceeded, and the check sample values for those days on which the MCL was exceeded. This total value is the sum of values entered in column 14.

(a) The monthly average must be rounded off to the nearest whole unit. For example: an average turbidity of 0.51 NTU would be rounded up to 1 NTU, while a value of 2.49 would be rounded down to 2 NTU.

(b) If the monthly average does not exceed 1 NTU, only routine reporting is required.

(c) If the monthly average exceeds 1 NTU, this must be reported to the State within 48 hours and the public must be notified.

92 - Wastewater Systems

92.1 - Wastewater System Inventory

92.11 - Instructions for Completing Form FS-7400-21, Wastewater System Inventory

An inventory is to be completed for all wastewater systems provided for Forest users and/or personnel. Inventory forms shall be completed for sites served by municipal wastewater systems, but shall not include special use systems, unless they also service a Forest Service facility or individual Regional instructions require it.

Use of Service-wide form FS-7400-21, Wastewater System Inventory is optional. Regions may elect to develop their own form or supplement form FS-7400-21 as needed.

However, if another form is used, the information provided by blocks 1, 2, 3, 9, 35, 36, and 37 on form FS-7400-21 is mandatory. This information is necessary for aggregation at the national level. It is recommended that all other information provided by form FS-7400-21 be included if an alternate format is used. It is felt that this data will provide the basis for proper wastewater system management at either the Regional or field level.

If form FS-7400-21 is used, only items applicable to the particular system need to be completed. Entries shall be made in simple English and not by coding.

The following numbers correspond to block numbers on form FS-7400-21.

Block No.	Instructions
1	Enter Region or Station number.
2	Enter Forest name and number.
3	Enter District name and number.
4	Enter State name and number. Use Federal Information Processing Standards (FIPS) 5.1 for State number.
5	Enter County name and number. Use FIPS 6.1.
6	Enter congressional district number. Use FIPS 9.
7	Enter watershed code in accordance with FSM 2570

Block No.	Instructions

8 Enter date the inventory form is completed.

9 Enter system name and number. Assign each waste-water system a number. Regions may wish to use the Portable Water Supply Inventory System number for those sites with waterborne wastewater systems. However, any number series, such as Recreation Information Management (RIM), capital investment project number or other numbering series, may be used.

Where several types of numbering series are available, consider using that number which represents either predominant use or longest use period.

When two or more systems serve one site, complete a separate inventory form for each system. It is suggested that these systems be assigned separate consecutive numbers. When two or more sites are served by the same system, do not report the system more than once.

10 Enter one of the following uses as applicable to the system:

Campground.

Picnic Ground.

Observation Site.

Visitor Information Center (VIC).

Research.

Vault waste receiving station.

Travel trailer dump station.

Other.

11 Enter the "Average Daily Population" (average daily use) for the system. For recreation sites, average daily population may be determined by using a percent of use efficiency, or by dividing the actual number of people using a site during an annual or calendar year use season by the number of days in that season. The percent of use efficiency should be determined by either using available records of use for individual systems or by estimating it.

Average daily population for administrative sites should reflect the average of high seasonal use based on a 60-day period.

12 Enter the number of days for the average period of time a system is in use. For systems with year-round operation, enter 365.

Block No.	Instructions

13 Enter persons at one time (PAOT) for the system. The entry for recreation sites should correspond with RIM figures, and is based on the number of units multiplied by five persons. For administrative sites, the number of year-round residences, including trailer houses, is multiplied by 3-1/2 persons to obtain the year-round resident PAOT. This figure is added to other year-round barracks residents to obtain the total resident PAOT. The summer resident, office worker, and visitor population is reflected in block 11.

14 Enter the year the system was constructed or, when applicable, the year of any significant reconstruction.

15 Enter the method by which the system was constructed:

Contract.

Forest Service force account (FA).

Human resource programs (HRP).

Other

16 Enter the amount of waste generated in both gallons per day and pounds of 55-day Biochemical Oxygen Demand (BOD5) per day. Flow meter recordings should be used for daily wastewater volumes where applicable. Otherwise, both hydraulic and organic loading should be based on per capital waste generation figures and system population (ch. 50).

These figures will basically reflect average daily loading. Underloading or overloading conditions from varying populations should be analyzed by operation and maintenance inspections or through condition surveys.

17 Enter the treatment capacity of the system in both gallons per day and pounds of BOD5 per day. Use design treatment calculations for capacity, unless modifications have been made.

18 Enter the number of miscellaneous facilities, as applicable.

Block No.	Instructions

19 Enter the type and number of toilet facilities from the following, as applicable to the system.

Vault/Pit riser.

Recirculating chemical.

Recirculating oil.

Incinerating.

Convertible (riser to flush).

Minimum flush.

Compost.

Other.

20 Enter the type, number, and associated volume of other waste generators. For example:

Fish cleaning station.

Travel trailer dump station.

Pumped vault or septage waste.

21 enter the type of material, capacity of the various vaults/holding tanks in the system and the date(s) of last pump out. Regions may elect to inventory vaults/holding tanks separately or list several individual vaults or tanks serving the same site on one form. For example:

Type of material	Capacity (gals)	Date last pumped
Steel	1,000	6/77
Fiberglass	750	8/78
Concrete	1,2000	9/78
Crosslink Polythylene	1,000	9/77

Block No. Instructions

22 Enter the size (diameter in inches), length (in feet), and type of pipe for all gravity sewer lines. For example:

(Diameter (in.)	Length (ft.)	Type of pipe
4	450	VC
6	200	DI
6	300	CI
8	1,500	PVC
10	500	Concrete

23 Enter the size (diameter in inches), length (in feet), and veritcal difference in elevation in feet for all sewer force mains. For example:

Diameter (in.)	Length (ft.) (ft.)	Vertical Difference
2	800	200
3	400	100
4	1000	320

24 Enter the type and number of lift stations within the system, including the number of pumps and the total horsepower within each category.

25 Enter the type and number of dosing tanks or dosing siphons.

26 Enter the type of material, capacity (in gallons), and the date of last pump out for each septic tank. Regions may elect to inventory each septic tank as a separate system or list several small individual septic tanks serving the same site on the same form. an example of the latter situation is:

Type of material	Capacity (gals.)	Date last pumped
Steel	750	6/77
Steel	1,000	9/76
Concrete	1,500	8/78
Fiberglass	750	6/79

Block No. Instructions

27 Enter the number of laterals, length of laterals and whether or not there is a distribution box for each absorption system. Absorption systems would in- clude:

Conventional subsurface.

Mounds.

Peats beds.
Pressurized subsurface.

Regions may elect to inventory each absorption system separately, or list several small individual systems serving one site on the same form. For example:

Number of laterals	Length of laterals (ft.)	Distribution box
Conventional subsurface - 4	75 ea.	Yes
Mound - 3	30 ea.	No
Peat bed - 6	50 ea.	No
Pressurized Subsurface - 4	100 ea.	No

28 For each of the various phases of treatment enter one (or more) of the following that best describes the method of treatment. Obviously, all systems will not have all types of treatment. However, some phases may have more than one type, so make the description as complete as possible.

Preliminary treatment

Bar Screen.

Comminutor.

Preaeration.

Grit removal.

Flow equalization.

Holding tank/metering equipment.

Other (Describe).

Flocculation.

Block No.	Instructions
28	Primary sedimentation.
	Clarification.
	Septic tank.
	Imhoff tank.
	Cesspool.
	Other (Describe).
	Secondary treatment
	Activated sludge.
	Contact stabilization.
	Extended aeration.
	Controlled oxidation.
	Facultative lagoon.
	Anerobic lagoon.
	Aerobic (complete-mix) lagoon.
	Aerated (partial-mix) lagoon.
	Oxidation ditch.
	Oxidation tower.
	Rotating biological contactor.
	Trickling filter.
	Secondary sedimentation.
	Microphor.
	Aerated septic tank.
	Irradiation.
	Land treatment processes (Overland flow, rapid in-filtration, slow rate).
	Other (Describe).
	Tertiary treatment
	Sand filter.

Block No.	Instructions
28	Pressure filter.
	Fabric filter.
	Microscreen.
	Centrifugal filter.
	Polishing pond.
	Nitrogen removal.
	Phosophate removal.
	Irradiation.
	Other (Describe).
	Advance waste treatment
	Activated carbon.
	Reverse osmosis.
	Ion exchange
	Other (Describe).
29	Enter the number of manholes in the system.
30	Enter one (or more) of the following which best de- scribes the method of disinfection:
	Chlorination.
	Ultraviolet (UV).
	Ozone.
	Iodination.
	Other (Describe).

Block No.	Instructions
31	Enter one (or more) of the following which best describes the method of sludge treatment. Sludge storage tank. Aerobic digester. Anerobic digester. Drying bed. Incineration. Treated offsite. Other (Describe).
32	Enter one of the following that best describes the method of effluent disposal: Point source discharge (National Pollution Discharge Elimination System (NPDES) permit). Sub-surface disposal. Spray irrigation. Evaporation pond. Percolation pond. Connection to municipal plant. Other (Describe).
33	Enter the NPDES permit number, if applicable.
34	Enter the applicable method(s) of vault/septage waste and/or sludge disposal and the haul distance (in miles) from the system, from the following: Municipal treatment plant. Forest Service treatment plant. Sanitary landfill. Land application. Incineration. Other (Describe).

Block No.	Instructions
35	Enter the estimated annual operation and maintenance costs (in hundreds of dollars) for the collection, treatment, disposal, and power components of each system. This would be the direct costs, such as salaries, tools, parts, chemicals, and specialized equipment, exclusive of administrative and overhead costs.
36	Enter the date of the most recent condition survey/maintenance inspection of the system.
37	Indicate (yes/no) whether or not there is an approved operation and maintenance plan for the system.
38	enter the State or Forest Service class designation, based on the type/size of system. Use individual State criteria or Regional criteria for determining system class.
39	Enter the name of the system operator.