

CHAPTER 5. INDICATOR #4. WORK ORDERS

5-1 GENERAL. This indicator examines the adequacy of a PHA's performance with regard to completing maintenance work items as measured by its work order system. The indicator evaluates how the PHA controls its active work orders as well as the timeliness of completion. Any work order active within the PHMAP assessment year is included regardless of when it was received or completed. However, only the calendar days within the current assessment year are included in the calculation. The example, below, shows all work orders a PHA shall calculate the number of days for in its assessment year:

Calculation of Days in Assessment Year for
Active Work Orders

	WOs	Days
Work orders received in a PHA's 1996 FY and not completed by a PHA's 1996 FYE but are completed by a PHA's 1997 FYE	12	38
Work orders received in a PHA's 1997 FY and are completed by a PHA's 1997 FYE	457	1534
Work orders received in a PHA's 1997 FY and not completed by a PHA's 1997 FYE	8	8
Total number of active work orders and days to be included in a PHA's assessment year:	477	1580

A. Adequacy of a PHA's work order system. The adequacy of a PHA's work order system shall be part of the onsite confirmatory review in terms of:

1. How a PHA accounts for and controls its work orders; and
2. A PHA's timeliness in preparing and issuing work orders.
3. What is adequate for one PHA may not be adequate for another PHA. Therefore, work order systems necessarily differ among PHAS, especially PHAS of a different size.

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4. For example, a large PHA (1250+ units) or medium size PHA (500-1249 units) may have an automated system that identifies and tracks all facets of

the work order process, including the quality of the workmanship of repairs made, i.e., the results of quality control inspections.

- a. The automated system would include information regarding a quality control sampling of work orders completed, performed by supervisory personnel, to determine all stages of work order accountability, i.e., was all information required on the work order addressed, were the documented repairs actually made and the quality of the workmanship, were all items on the work order form completed, including parts used, the cost of repairs and parts, were damages caused by the resident and if so, was the resident charged for the repairs, are all required signatures present, etc.
 - b. The automated system would also include information regarding a quality control sampling of the timeliness of the preparation and issuance of a work order to ensure the timely completion of needed repairs, i.e., was the work order entered into the automated system the same day it was received, was the work order transmitted to the maintenance staff within 24 hours, was the length of time to complete the work order reasonable, was the work order closed out in the automated system the same day it was completed, etc.
5. In a second example, a small PHA (100-499 units) and very small PHA (1-99 units) may have a manual work order system that includes a formal work order log that identifies emergency and non-emergency work orders.
- a. The system may consist of individual resident/unit files, where all information regarding work orders and repairs are contained; or
 - b. The system may consist of an index card tracking system kept in a centrally located place where all information regarding work orders and repairs are contained.

6. In order to verify the information in either the automated or manual system, the reviewer should select a sampling of work orders, and reinspect the units where the sampling of work orders were completed, including units where quality control inspections were conducted.

- a. The reviewer should select half the sampling from the last week of the assessment year and half from the week prior to the confirmatory review. This method will provide a comparison of the number of repairs required subsequent to the work orders completed during the assessment year. The focus should be only on those items included in the original work orders.
 - b. If a PHA contracts out some repairs and does other repairs in-house, sample both types of work orders.
7. HUD does not mandate the type of system to be used to track work orders and repairs, but the on-site confirmatory review should establish if a system exists that records work order activity and repair data, and allows for the retrieval of PHMAP related information.
- B. A work order is a directive to a PHA employee or contractor to perform one or more tasks on a PHA property. Work orders can be generated because of a condition noted by a PHA staff member, a request by a resident for service or a preventive maintenance work order. Any kind of an order under which maintenance work is done is considered a work order, i.e., an oral directive, a letter from the local code enforcement department, etc. HUD does not prescribe the form to be used by a PHA to complete its maintenance work. However, the PHA must utilize a system that accounts for and controls its work orders and documents the timeliness in preparing/issuing work orders. In order to adequately do this, information on the work order should include:

1. Type of work order, i.e., emergency/non-emergency and, if necessary, preventive maintenance, cyclical, etc;
2. Description of the type of work to be performed;
3. Date and time of receipt of request;

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4. Date and time of issuance to person/entity to complete work;
5. Date and time work is completed;
6. Identification of the parts and the cost of the parts used to complete the repair for purposes of

inventory control; and

7. Determination of whether the repair should be billed to the resident due to resident damage.

C. HUD recognizes that there are several maintenance tasks for which PHAs generally do not complete work orders. These tasks include cyclical work, work deferred for modernization and work necessary to return vacant units to occupancy. These tasks will be more fully described, below.

1. A PHA's work order log must, at a minimum, identify the work order as either an emergency or non-emergency.
2. If a work order is generated for all types of non-emergency work, the PHA's work order system must be further refined so that work orders for the types of tasks that should not be included for this indicator can be identified and exempted.
3. A good work order log is essential to support a PHA's PHMAP certification.

5-2 WORK ORDERS THAT MUST BE TRACKED. Work orders counted in the assessment year fall in one of the three categories, as follows:

- A. Work orders received in a prior assessment year and completed in the current assessment year;
- B. Work orders received and completed within the current assessment year; and
- C. Work orders received but not completed before the end of the current assessment year.
- D. By including all active time, even if the work order has not been completed, PHAs will not be penalized for time from a prior assessment year or rewarded by being able to exclude open non-emergency work orders that have not been completed.

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- E. The work order universe can be identified for the assessment year by completing the following exercise:

Average Work Order Completion Time Calculation

	Calculation Items	Totals
1.	Number of work orders carried forward from prior FY:	

2. Number of work orders received/completed in FY being assessed:
3. Number of work orders received but not completed in FY being assessed:
4. Total active work orders (add Lines 1, 2 and 3):
5. Number of days to complete work orders carried forward from prior FY:
6. Number of days to complete work orders received and completed in FY being assessed:
7. Number of active days for work orders remaining open in FY being assessed:
8. Total completion days (add Lines 5, 6, and 7):
9. Average completion time (divide Line 8 by Line 4):

5-3 COMPONENT #1, EMERGENCY WORK ORDERS. Indicator #4, component #1, measures the percentage of emergency work orders completed-or abated within 24 hours. The calculation is completed simply by dividing the total number of emergency work orders completed or abated within 24 hours during the PHMAP assessment year by the total number of emergency work orders generated during that PHMAP assessment year.

- A. An emergency work order is issued to correct a condition that poses an immediate threat to life, health, safety or property, or related to fire safety.
 1. Examples include, but are not limited to, an unhealthy or undrinkable water supply, gas leak, broken/blocked sanitary sewer line, failed heating system, hazardous electrical system, uninhabitable unit as a result of a fire, and situations causing an exposure to asbestos, lead based paint, or other toxic materials.

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2. Depending on specific circumstances and the degree of the problem, a leaking roof, broken window, or broken stairs/hand rails/stair threads might also be classified as an emergency.
- B. In most cases, the task directed by the emergency work order can be completed or the hazard can be abated within a short period of time. sometimes it will be necessary to obtain additional material or equipment to complete the work. In these situations, PHAs can

temporarily abate the problem so that it no longer poses an immediate threat.

1. For example, a broken window or leaking roof can be patched or boarded to abate the problem temporarily. A non-emergency work order would then be generated to correct a condition which is no longer considered a threat to health and safety.
2. If the emergency work cannot be completed, the situation can be abated by transferring the resident away from the emergency situation.

C. Calculation of emergency work orders.

1. The PHMAP software makes all calculations relating to this component. Even though the calculation is automated, the reviewer should still have a thorough understanding of how these calculations are made and of the exemptions that may be taken by the PHA. Changes resulting from an on-site confirmatory review must be made by the local State/Area Office after the conclusion of the on-site confirmatory review by inserting the revised data into the PHMAP module, in the appropriate iteration, for automated calculation and re-scoring.
2. The calculation of the percentage of emergency work orders completed or abated within 24 hours is as follows:

Calculation of the Percentage of Emergency Work Orders Completed or Abated Within 24 Hours

99 emergency WOs completed/abated within 24 hours = 99%
100 total number of emergency WOs received

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3. In this example, the PHA would score a grade of A for this component since it completed or abated at least 99% of emergency work orders within the assessed year.

5-4 COMPONENT #2. NON-EMERGENCY WORK ORDERS. Indicator 14, component #2, non-emergency work orders, measures the average number of days for a PHA to complete non-emergency work orders. The first interim PHMAP regulation required that the performance for indicator 16, outstanding work orders, be measured with regard to the number of nonemergency work orders that were outstanding at the end of the PHA's fiscal year. This has been changed by the new PHMAP interim regulation. This component now measures the average number of days to complete work orders that were

active during the assessment year.

- A. Non-emergency work orders are issued to correct conditions that do not pose an immediate threat to life, health, safety or property, or are not related to fire safety.
- B. There are several types of non-emergency work orders completed by a PHA. Some types should not be included in the calculation for this component. For this reason, it is necessary for PHAs to understand and properly categorize their work orders so that this PHMAP indicator is reported accurately.
 - 1. Types of non-emergency work orders which must be counted.
 - a. Response generated work order. These work orders are issued because a PHA employee noted a problem or responded to a resident's request for service. Many of these work orders result from the annual local code/HQS equivalent inspection. Examples of this type of work order include, but are not limited to, repairing/replacing missing screens, repairing/replacing appliances, recaulking around bathtubs, changing washers on leaking faucets, etc.
 - b. Preventive maintenance work order. These work orders are those issued for scheduled maintenance procedures that are systematically performed at regular intervals to prevent premature deterioration of buildings and systems. They can be generated as a result of preventive maintenance inspections, but can also be

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issued as a part of the preventive maintenance plan. Examples of this type of work order include, but are not limited to, changing washers in faucets, servicing the furnace, etc. PHAs/HUD should make sure they are not classifying cyclical work orders as preventive maintenance work orders.

- 2. Exempted non-emergency work orders. Most PHAs do not issue work orders for the types of non-emergency work listed below. If they do generate a work order, the PHA's work order log must indicate the type of non-emergency work order so that these work orders can be readily identified and exempted from the PHMAP calculation for component #2.

- a. Cyclical work order. These work orders are issued for the performance of routine maintenance items that are done in the same way at regular intervals. Most of this type of work is completed in the PHA's common areas. Examples of this type of work order include, but are not limited to, mopping hallways, picking up litter; cleaning the trash compactor, mowing grass, etc. These are the normal day-to-day activities that PHAs perform in order to maintain the operation and appearance of the PHA.
- b. Deferred for modernization work order. Maintenance work being completed under a modernization program is not included. This encompasses any work that is combined with similar work and scheduled to be completed within the current or following year if there are less than three months remaining before the PHA's FYE when the work order was generated under the PHA's modernization program or other capital improvement program. This work is included in the modernization budget or program budget rather than the PHA's operating budget.
- c. Make ready work orders. These work orders are issued to make a vacant unit ready for re-occupancy. Examples of this type of work include, but are not limited to, painting, cleaning appliances, replacing floor tiles, patching walls, etc.

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- C. Calculation of the average number of days to complete active non-emergency work orders.
 1. The PHMAP software makes all calculations relating to this component. Even though the calculation is automated, the reviewer should still have a thorough understanding of how these calculations are made and of the exemptions that may be taken by the PHA. Changes resulting from an on-site confirmatory review must be made by the local State/Area Office after the conclusion of the on-site confirmatory review by inserting the revised data into the PHMAP module, in the appropriate iteration, for automated calculation and re-scoring.
 2. The average of the number of days to complete active non-emergency work orders is calculated by dividing the days the non-emergency work orders

were active by the number of nonemergency work orders active during the PHMAP assessment year.

Average Number of Days to Complete Active N/E Work Orders

823 days non-emergency work orders were active = 20.07 days
41 active non-emergency work orders

5-5 REDUCTION IN THE PERIOD OF TIME REQUIRED TO COMPLETE
NONEMERGENCY WORK ORDERS DURING THE PRECEDING THREE YEARS.

- A. PHAs have the option of reporting on the progress they have made within the previous three years to reduce the period of time required to complete nonemergency work orders.
1. PHAs do this by comparing the period of time it took to complete non-emergency work orders in the current PHMAP assessment year to the period of time it took to complete non-emergency work orders in the first year of the three year period, which includes the assessment year.
 2. For example, if the current assessment year is FY 1997, the first year of the three year period is FY 1995. The period of time it took to complete non-emergency work orders in the current assessment year is subtracted from the period of time-it took to complete non-emergency work orders in the assessment period two years earlier.

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Generally, PHAs that have reduced the period of time it took to complete non-emergency work orders by at least 5 days within the three year period will benefit from this calculation.

- B. A PHA that elects to use this option must recompute the period of time it took to complete non-emergency work orders for the first year of the previous three year period so that it is consistent with the way of calculating work orders for the current PHMAP assessment year. In other words, a PHA cannot compare the percentage of work orders outstanding for the base year to the period of time it took to complete nonemergency work orders for the year currently being assessed. An example of this calculation based on information provided by a PHA is as follows:

Reduction in the Period of Time Required to Complete
Non-Emergency Work Orders During the Preceding Three Years

Fiscal Year	Days to Complete WOs
FY 1995	59

- C. In this example, the PHA would receive a grade of C for this component since it reduced the period of time it took to complete non-emergency work orders by at least 15 days. This may be an advantage to the PHA. By using the other criteria, the PHA would have otherwise received a grade of D for this component.

5-6 ADDITIONAL ADJUSTMENTS.

- A. A PHA with at least five percent of its units subject to either or both of the conditions defined in subparagraph B, below, shall, if it so chooses, be issued an adjusted PHMAP score in addition to the regular score for indicator #4. These additional points compensate for differences in the difficulty of managing developments impacted by the physical condition of the units and/or the neighborhood environment surrounding the properties. This additional adjustment must be requested by the PHA on form HUD-50072.

- 1. A PHA that receives the maximum potential weighted points for this indicator may not claim an additional adjustment for this indicator.

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- 2. Application of these additional adjustments may not result in a score higher than the maximum score authorized for this indicator.
- 3. If only certain units or developments received substantial rehabilitation, the additional adjustment shall be prorated to exclude the units or developments with substantial rehabilitation.
- 4. The Date of Full Availability (DOFA) shall apply to scattered site units, where the age of the units and buildings vary, to determine whether the units have received substantial rehabilitation within the past ten years and are eligible for an adjusted score for the physical condition factor. DOFA also applies when scattered site units are built under new construction.
- 5. Units that fall into this category but have already been exempted from consideration for any other reasons shall not be counted again in this calculation.

- D. Definitions for physical condition and neighborhood environment.

1. Physical Condition. Units located in developments that are over ten years old that require major capital investment in order to meet local code or minimum HQS standards, whichever is applicable, can qualify for an additional adjustment. Units located in developments that have been comprehensively modernized within the past ten years cannot be included in the total for this adjustment.
2. Neighborhood Environment. Units located in developments where the immediate surrounding neighborhood (majority of the census tracts or census blocks on all sides of the development) has at least 51 percent of the families with incomes below the poverty rate, as documented by the latest census data, qualify for an additional adjustment.
3. Additional points, or fraction thereof, may be added to the score for this indicator. The score shall be adjusted as shown below:

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Additional Adjustment

Percent of Total PHA Units	Extra Points
At least 5% but less than 10% of all PHA units	.5
At least 10% but less than 20% of all PHA units	.6
At least 20% but less than 30% of all PHA units	.7
At least 30% but less than 40% of all PHA units	.8
At least 40% but less than 50% of all PHA units	.9
At least 50% of all PHA units	1.0

4. PHAs shall maintain supporting documentation to show how they arrived at the number and percentage of units out of their total inventory that are subject to the additional adjustment.

C. Calculation for physical condition and neighborhood environment. The percent of units to which the additional adjustment applies is computed as the total number of units for which the physical condition and neighborhood environment apply, with each unit counted only once if both conditions apply.

1. For example, a PHA that achieves less than a grade

A on indicators 1, 14 and #5 would calculate the adjustment for physical condition and neighborhood environment for indicator 14 as follows:

PHAs that Achieve Less than a Grade A
on Indicators #1, #4 and #5

Number of units that qualify under both physical condition and neighborhood environment:	10
Number of units that qualify under physical condition only:	+ 5
Number of units that qualify under neighborhood environment only:	+ 5
Total eligible units:	20

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2. If this were a 100 unit PHA in the above example that otherwise had not exempted these units for any other reason, .7 percentage points would be added to the score for this indicator.
3. There is a connection between indicator #1, vacancy rate and unit turnaround time, indicator #4, work orders, and indicator #5, annual inspection of units and systems. A PHA that obtains a grade of A for indicator #4 and/or indicator #5, MAY NOT claim an additional adjustment for indicator #1 based on the physical condition of its developments, but MAY claim an additional adjustment for indicator #1 based on neighborhood environment.

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