MAINTENANCE MANAGEMENT FUNDAMENTALS

1. Introduction to Maintenance Management

Purpose of Maintenance

Maintenance is the upkeep of property and equipment so that they are kept in decent, safe, and sanitary condition as required by *Title II, Section 203 (b)* of NAHASDA. It also prevents the housing stock from deteriorating or declining into disrepair.

Effective maintenance is critical to establishing good relationships with residents and is a highly visible form of good customer service.

The TDHE is responsible under NAHASDA for maintaining its housing units. *Title II, Section 203* describes some of the program requirements and *Section 203 (b)* describes and defines maintenance responsibilities as follows:

> *Maintenance and Efficient Operation.*
>
> *Each recipient who owns or operates (or is responsible for funding any entity that owns or operates) housing developed or operated pursuant to a contract between the Secretary and a TDHE pursuant to the U.S. Housing Act of 1937 shall, using amounts of any grants received under this Act, reserve and use for operating assistance under section 202 (1) such amounts as may be necessary to provide for the continued maintenance and efficient operation of such housing. This subsection may not be construed to prevent any recipient from demolishing or disposing of Indian housing referred to in that subsection, pursuant to regulations established by the Secretary*.

Tribal Housing Entity Maintenance Obligation

Two common TDHE programs that require a continuous commitment to maintenance are the low-income rental-housing program and the Mutual Help Homeownership program.

Maintenance for TDHE-owned rental homes

The TDHE is responsible for maintenance and repairs when renters do not cause the

damage. The renters, at their own expense, should repair damage they caused. If the renter fails to make required repairs, the TDHE must make the repairs and bill the repair charges to the renter.

A dwelling lease between the TDHE and the renter guarantees that the TDHE will provide certain services and the renter will maintain the property in the same condition in which it was rented. The dwelling lease is particularly important in developing a maintenance policy because it specifies TDHE and renter responsibilities.

Maintenance for homeownership program homes

Homebuyers are responsible for paying their own utilities and for all maintenance of their home. The Homeownership (or Lease-Purchase) Agreement is an agreement between the TDHE and a customer in a homeownership program. Many TDHEs still use the Mutual Help and Occupancy Agreement (MHOA) from the HUD Mutual Help Homeownership Program as their homeownership agreement. On page 5, Article VIII, entitled "Maintenance...," the MHOA outlines how to and who will maintain the home. It states that the "homebuyer shall be responsible for all maintenance of the home, including all repairs and replacements (including repairs and replacements necessitated by damage from any cause)."

"A TDHE is responsible for assuring that the housing is being kept in decent, safe, and sanitary condition and that the home and grounds are maintained in a manner that will preserve their condition...". It also lays out the terms under which the home will be inspected. All homeownership agreements should describe thoroughly the maintenance responsibilities of both the homebuyer and the TDHE.

Maintenance for rental assistance programs (Section 8)

Under Section 8-type Tenant-based Rental Assistance voucher programs, the private landlord is responsible for maintenance. Damages caused by the renter are to be repaired by the renter at their own expense.

Maintenance Planning, Budgeting, and Control

The Indian Housing Plan is a document that identifies the Tribe's housing-related needs as well as the plan for addressing those needs. The maintenance needs are addressed in the plan along with all of the other "affordable housing activities."

Title II, Section 202 of NAHASDA describes the eligible affordable housing activities. The eligible activities include maintenance of housing previously developed or operated by the housing entity, whose existing housing inventory, and any new units are developed with NAHASDA funding.

A maintenance plan is the result of analyzing the maintenance needs in the service area. It should be a logical plan to address documented needs. Physical inspections, surveying, and other methods may be necessary to establish maintenance needs.

When planning for maintenance, it is important to address all of the issues, but it is also important to realize the limitations of maintenance capacity and funding. The areas of greatest need should appear in the plan before the less critical needs.

Drafting an Annual Maintenance Plan

Preparing an annual plan is critical to the effective management of a comprehensive maintenance program. The annual plan should establish the work items, a schedule for completing them, and the resources needed for completion on a timely basis. The annual plan serves as the basis and justification for the maintenance department budget.

The annual plan should include at least the following components:

- Routine and seasonal work
- Annual inspections
- Vacant units
- Preventive maintenance
- Emergencies
- Extraordinary repairs
- Service contracts
- Staff
- Materials, supplies, and equipment budget

Routine and Seasonal Work

Staff should be designated to perform all routine and recurring maintenance tasks. These include work orders initiated by residents, emergencies, and vacancy turnaround. Most of this work will be scheduled and performed through the work-order system. Seasonal work can be scheduled as required. If these, or similar work requirements, exceed available resources, seasonal help or service contracts can complete them in a timely manner.

Annual Inspections

Inspections are essential for effective maintenance. Inspections should be conducted at least annually. Problems identified during the inspection process should be corrected within a reasonable amount of time and re-inspected for quality control and completeness.

Vacant Units

An effective annual maintenance plan includes provisions for turning around vacancies. Vacant units result in reduced income for the TDHE and may invite vandalism and other

security breaches, creating additional maintenance costs.

For planning purposes, review the previous year's move-out records to estimate the number of vacancies likely to occur during the coming year.

Preventative Maintenance

Preventive maintenance (PM) is a planned program to ensure proper functioning of facilities and equipment in order to avoid or minimize extensive and costly repairs.

Preventative maintenance should be scheduled in the annual plan, based on manufacturers' recommendations, historical information, and seasonal considerations. PM lessens the frequency of regular maintenance work and extraordinary repairs.

Emergencies

The annual plan should contain provisions for handling emergency situations. Response to emergencies is the highest priority of all maintenance-related work items. Emergencies will meet one or both of the following conditions: (1) residents and/or staff are faced with a health or life-threatening situation; or (2) there is a condition which might result in serious damage to a TDHE home if not corrected within a 24-hour period.

Some examples would include:

- Gas leaks
- Exposed electrical wires
- Broken water lines
- Clogged sewage lines
- Roof leaks
- Broken entrance door

After-hours Emergencies

For emergencies that occur after hours or on weekends, the TDHE must implement a system for notifying appropriate personnel. Providing an after-hours emergency phone number for residents and other interested parties in order to contact a designated person is an effective method. The responsibility for attending to after-hours calls should be assigned to qualified maintenance personnel to assure that after-hours emergencies are handled in an expeditious manner. As soon as possible, complete a work order to document the repairs and costs.

Service Contracts

A TDHE may need to contract outside firms when the staff is unable to perform the required maintenance tasks. Contracting may also be required when tasks require licenses or certifications that the maintenance staff does not have, or when a contractor

can perform tasks more economically.

Some examples of such work include:

- Utilities-system inspection and repair
- Boiler-plant maintenance
- Extermination services
- Vacant-unit preparation and painting
- Painting
- Vehicle maintenance
- Cooling and air-conditioning service
- Grass mowing
- Snow removal

Budgeting

A maintenance budget is an outline of the plans and activities the maintenance staff intends to complete in the next fiscal year. The first consideration in preparing the maintenance department budget is to be realistic. Review previous budgets and consider price increases that will likely occur. The budget should also include any maintenance supplies and materials that will be needed. Having accurate supply management records will help determine the items that need to be in the maintenance department budget.

Maintenance Budget Outline

a. Ordinary Maintenance
    1. Labor
    2. Supplies and materials
    3. Contract costs
b. Non-routine Maintenance
    1. Extraordinary maintenance
    2. Casualty loss (including settlement)
c. Capital Expenditures
    1. Equipment replacement
    2. Betterments and additions
d. Salaries and Benefits
    1. Current salary or hourly rate for all maintenance staff and total annual hours
    2. Overtime
    3. Salary increases
    4. Seasonal and temporary workers
    5. Additional staff
    6. Benefits

7. Travel and Training Expense

Maintenance Work Orders

An effective work order system provides all the information needed to set priorities as well as schedule and monitor the work. It is a means to control what work gets done, when it gets done, and by whom. It also allows for additional control over the time and cost of completing the work.

Work Order Systems

Work orders should be issued for all maintenance activities. Once initiated, work orders are logged in and assigned a priority, and anticipated materials requirements noted.

a. Write the Work Order
All work orders will be written out on a standard work order form by appropriate TDHE staff. The order is copied to the maintenance records, the resident, and the TDHE finance department for inclusion in the unit files.

b. Schedule the Work Order
Work orders should be scheduled based on priorities (ranked from #1-Emergency to #6-Special Projects). TDHE priorities dictate the scheduling of work orders. In general, the priorities are as follows:

1. Emergency: Life-threatening or extreme property damage
2. Urgent: Major inconvenience to resident, property damage
3. Vacancy Prep: Prepare unit for occupancy
4. Routine: Resident or management request
5. PM: Planned and seasonal maintenance
6. Special Project: Any type of deferred maintenance

Notify residents in advance of any scheduled work affecting them.

c. Assigning Work Orders and Completing the Work
The maintenance supervisor or someone knowledgeable of maintenance requirements should assign work orders to a maintenance mechanic. After gathering the required supplies, materials, and equipment, the mechanic completes the work, keeping records of all time and materials used.

d. Complete Work Orders

The mechanic completes the work order by describing the work performed, materials used, and the date and time completed. He or she also determines whether a resident charge is involved, then reviews the completed work order with the resident, and requests the resident's signature on the work order. The mechanic leaves one copy of the completed work order with the resident. Time, materials, and supply costs are recorded and charged to the resident account, if appropriate.

The completed work order will be included in the unit file and the maintenance files, and a copy routed to the finance department.

e. Review of Work Orders
Completed work orders should be reviewed regularly to determine the amount of work completed, the work yet to be done, the actual hours expended completing work items, and the supplies and materials consumed. Consistent review of the work orders provides management control over the progress being made, inventories, and accountability of maintenance staff.

f. Tracking the Work Orders
Work orders are numbered in sequence, so the Work Order Log records the work orders in numerical order. It should be obvious which work orders are outstanding and which ones have been completed. The log also contains the date the work was completed, illustrating what work remains to be done. The Work Order Log should be updated daily to reflect all new work orders initiated and all work completed.

g. Unit Service Record
Maintenance service records are kept for each unit. This recordkeeping provides an overview of what work has been performed and when it was done. Work orders can be used as unit service records if no other system is readily available.

2. Maintenance Categories and Priorities

All maintenance work should be assigned to a maintenance category. When all work is categorized and given a priority ranking, managers can effectively manage the workload in order to address the most critical needs first. Common maintenance categories include: emergency maintenance; preventative maintenance; resident maintenance; homebuyer maintenance; routine maintenance; non-routine maintenance; and extraordinary maintenance.

Emergency Maintenance

Emergency maintenance is any maintenance performed in response to an unanticipated issue threatening life or property. Emergency situations are the highest priority

maintenance work. An emergency situation meets one or both of the following tests:

- The situation poses a serious health or life-threatening situation to persons and/or
- A condition exists that will cause serious structural or systems damage to property if not addressed within 24 hours.

Examples of emergency situations include:

- Fires
- Gas leaks
- Electrical hazards
- Power failure
- No heat
- Sewer back-ups
- Malfunctioning elevators
- Broken water lines
- Water leaks

After-hours Emergency Response Plans

TDHEs address emergency situations by having staff available (at least “on call") 24 hours a day to deal with emergencies.

To respond to emergency work effectively there must be:

- Qualified and responsive staff that can work independently;
- Qualified and responsive contractors available at all hours;
- A system for getting of supplies, contractors, and/or equipment during non-business hours and weekends;
- Access to materials and equipment that are on hand;
- Lists of contact information for other on-call staff and supervisors;
- Keys available for facilities and units served.

This information should be in a continuously updated Emergency Response Plan. The plan must be readily available to all responsible parties assigned to handle emergencies during off-hours (nights, weekends, and holidays).

Preventive Maintenance (PM)

Preventive maintenance is the inspection, monitoring, and care of facilities or equipment to prevent future emergency maintenance and/or major structural or system failures. When effectively implemented, PM minimizes the amount of regular maintenance and

extraordinary repairs. It also helps to extend the lifetime of facilities and equipment. The goal of PM is to detect and correct minor deficiencies so that major repairs and failures are reduced to a minimum.

There are two phases to a Preventive Maintenance Program:

1. *Preventive Maintenance Inspections*
   Regular inspections will minimize the occurrence of expensive and time-consuming chain reaction failures that could have been prevented by a relatively minor repair performed at an earlier time.

2. *Annual Preventive Maintenance*
   This consists of a system for scheduling and performing periodic maintenance such as: exterior painting; cleaning leaves from gutters; cleaning and lubricating heating and cooling systems; and repairing deficiencies found during inspections.

Preventative Maintenance Procedures

The following is an example of the basic procedures involved in a typical PM program:

a. Management ensures that residents are given advance notice that their unit will be inspected on a given date.

b. Preventive maintenance inspection staff inspects all units at least once a year and prepares work orders for work to be done or work that is performed at the time of inspection.

c. The PM team uses a checklist of the maintenance items to be inspected for PM and then inspects and provides maintenance as required in each unit. (Work that cannot be completed by the inspection staff is referred to a Work Order for future completion.)

d. The Maintenance Supervisor schedules service calls for all items that are beyond the PM team's capability.

Resident Maintenance

Resident maintenance includes those maintenance tasks that are the residents' responsibilities or that may be accomplished by residents. To ensure the effectiveness of resident maintenance, periodic maintenance training should be provided. Residents may perform many minor maintenance tasks that will assist the maintenance operation, save many hours for the maintenance department, and result in better care of the units by residents.

Homebuyer Maintenance

There are several activities that can ensure that residents in the homeownership program are maintaining their homes in a manner compatible with standards outlined in their purchase agreements:

- Scheduled inspections;
- Counseling for homebuyers, prior to and after occupancy, that explains maintenance obligations;
- Training, if necessary, on how to perform the required tasks; and
- Training homebuyers to use available resources in the community to carry out their maintenance obligations.

Routine Maintenance

Routine maintenance is the planned response, including ordinary maintenance, for the repair of structures and equipment that have deteriorated through normal wear and tear.

It also includes:

- Responding to service requests when items are not functioning correctly;
- Making minor repairs to facilities, systems, and equipment;
- Replacing component parts of systems and equipment.

The TDHE normally performs all routine maintenance for residents in its Rental Program. Maintenance is performed primarily on a service-call basis, and the maintenance department should structure its maintenance program in a manner that facilitates responding to service requests within a reasonable time period.

Mutual Help and other homebuyers are obligated to perform routine maintenance for their units and grounds.

Non-routine Maintenance

Non-routine maintenance involves replacement or improvement of a structure, system, or major equipment, usually at a substantial cost, whether planned or caused by unforeseen events (e.g., storms, deterioration of an entire system, abuse, etc.).

Regular maintenance staff or contractors (if necessary) may perform non-routine maintenance. Non-routine maintenance includes repairs or replacements of:

- Leaking roofs
- Heating systems and electrical systems
- Thermostats
- Ranges
- Refrigerators

- Water pumps, pressure tanks, and wells
- Septic systems, including drain fields

Extraordinary Maintenance

Extraordinary maintenance consists of unforeseen jobs that are beyond the capability of the maintenance staff. This includes work items such as:

- Modernization work
- Hazard abatements (lead-based paint, radon, asbestos, etc.)
- Energy efficiency upgrades
- Accessibility improvements

3. Inspections and Quality Control

Inspections are the foundation of any solid maintenance program. It is necessary to know the physical condition of the homes in order to develop an effective maintenance program. All inspections should be done in a uniform way in order to assure objectivity, thus improving the accuracy of the information gathered. Inspection forms or checklists are useful so that the same criteria are evaluated every time, regardless of who is doing the inspection. An inspection checklist also assures that the inspector is looking at all the areas needing inspection. A comprehensive checklist includes maintenance items pertaining not only to safe, sanitary, and decent housing, but it also includes major preventative maintenance items.

Inspecting for Risk Management

TDHEs experience more property losses or damage due to fire than from any other cause. The maintenance department is vital to implementing smoke detector requirements and preventing other types of losses. During annual inspections, while completing work orders, or on other occasions maintenance staff visit units, they should always be alert to potential hazards and the condition of the smoke detector. Inspections provide the best opportunity to identify hazards. Some examples that could lead to tragedy:

- Portable heaters placed too close to flammable objects
- Overloaded electrical outlets
- Storage of flammables
- Gas leaks
- Unsafe occupant modifications
- Missing fire extinguishers
- Inoperable smoke detectors

- Clogged furnace filters
- Sidewalk and parking area hazards
- Uncut grass
- Grease build-up on stove or in oven

Many TDHEs have loss-prevention programs. The maintenance staff works with the counselors and other staff to identify potential hazards. It is an opportunity for staff to interact with residents in a positive setting and results in benefiting everyone involved.

Maintenance Inspections

An effective TDHE program of inspections and preventive maintenance can establish control over facilities management and maintenance efforts. Inspections will save the TDHE money in the end. The following is a list of the types of inspections routinely performed by maintenance departments:

- Annual (or semi-annual) inspections
- Preventive maintenance inspections
- Warranty inspections
- Occupancy inspections (move-in inspections)
- Vacancy inspections (move-out inspections)
- Housekeeping unit inspections
- Special inspections
- Quality control inspections
- Grounds inspection
- Operator inspections
- Risk management/loss prevention inspections

Annual Inspections

NAHASDA and regulations require TDHEs to assume the ultimate responsibility for maintaining all its program units. A TDHE must complete a periodic inspection of all units and grounds. All residents are given notice in accordance with the lease agreement before the staff enters units for inspection. A resident should be given the opportunity to be present during the inspection, and they should always be given a written report of the inspection's findings. All identified deficiencies must be followed up with work orders initiated for findings in rental units. For homeownership programs (Mutual Help, Lease-purchase, etc.) in accordance with their homeownership agreement, the homebuyer receives a letter informing them of the findings, and a follow-up inspection is performed to verify that the homebuyer has corrected the findings.

Down time is reduced and the overall cost of the maintenance program is reduced as well by conducting annual inspections and identifying problem areas early. Some TDHEs find it valuable to schedule semi-annual inspections. During unit inspection and repair, other work orders, such as planned, preventive, and resident-generated, are incorporated.

After the inspection, there are two steps to be completed:

(1) Document all items in each unit that require repair or replacement.
(2) Implement follow-up procedures to see that all required repairs and replacements have been completed in a reasonable period of time.

Periodic inspections may also identify extraordinary situations where major items must be replaced or repaired through modernization.

Warranty Inspections

During the warranty period, a TDHE should inspect each unit at least quarterly. The final inspection is done prior to all warranties' expirations to assure that the construction contractor may be held responsible for any defects.

The development contract specifies the warranty period for various items covered by the contract. When the TDHE identifies a warranty issue, it informs the contractor that a defect has been found. After the problem is corrected, it is inspected again to ensure that it was properly repaired.

The development contractor assigns the warranties of any equipment or appliances installed in the home to the owner. Any repairs to appliances or equipment that are still under warranty become the manufacturer or supplier's responsibility. The TDHE is responsible for pursuing warranty claims and for following up on any warranty defects.

Move-In or Occupancy Inspections

The TDHE staff and the incoming resident should conduct a formal move-in inspection. After completing the inspection, the resident signs the inspection checklist and retains a copy for his or her records. The TDHE retains a copy for the resident's file. A work order is written for any identified problems, and the problems are corrected. Conduct a follow-up inspection to confirm that the items have been repaired.

Move-Out or Vacancy Inspections

All units are inspected following a move-out, and an inspection checklist is completed. The resident should participate in the inspection and sign the inspection form. A work order is completed for all the necessary repairs. The maintenance staff should complete the repair work as soon as possible in preparation for the next occupant. All problems are noted in a letter to the resident, and those repairs that were the resident's

responsibility are charged to the resident's security deposit or are billed to the departed resident.

Special Inspections

Special inspections are conducted any time the executive director, counselors, or the maintenance supervisor deems it necessary. The most common special inspection is done as a follow-up on residents who have a history of poor maintenance habits. Contractors with special expertise also do special inspections—for example, someone with knowledge of asbestos, radon gas, or lead-based paint.

Quality Control Inspections

Quality control inspections are used to verify the quality and quantity of work performed by the TDHE maintenance department. For a percentage of all work orders, a maintenance supervisor should do the inspections. Quality control inspections verify the actual quality and quantity of materials used and time expended, in addition to determining if work has been completed in an acceptable, professional manner.

4. Maintenance and Risk Management

The maintenance management program should include a risk management component to manage the potential risks to TDHE staff, customers, properties, and facilities. Since maintenance staff members work closely with the residents and are in the units regularly, they are the most effective part of a risk management program. They should use each visit to educate residents about fire hazards, such as disconnected smoke detectors, as well as other risk factors.

- During inspections and repair work, the maintenance staff must be constantly aware of conditions that are potentially dangerous. The inspection checklist should include such items as a working smoke detector, properly flowing gas pipes and water pipes, etc. The maintenance staff is in the best position during inspections to prevent incidents.
- Once a potential hazard has been identified, a work order should immediately be written and entered into the work order log. Depending on its seriousness, the problem should be corrected as soon as possible. Prompt attention must be given to hazards that are safety threats such as fire, explosion, or gas leak.

- When the maintenance staff is repairing a unit, they must be extremely careful not to endanger the family while making the repair and to make sure that their work is complete and competent.
- The maintenance supervisor routinely visits units after the maintenance crew has done a repair to make sure that there are no potential hazards resulting from the repair.
- In all cases, the maintenance staff should keep a record of the repairs (particularly if the repair was related to safety) in the resident's file. All files that relate to that particular unit must show what work was performed and when it was done in order to document that the loss was not caused by negligence.