

VII. PHYSICAL PLANT INVENTORY

FACILITY INVENTORY AND INSPECTION PROGRAM

Buildings and other structures in state parks are necessary to provide services to park visitors. These structures are essential for protecting public safety, health, and welfare while providing opportunities for outdoor recreation. They include infrastructure, such as roads, parking lots, trails, and systems for potable water, electrical distribution, and sewage treatment. They also include operational and recreational facilities, such as campgrounds, picnic areas, concession building, boardwalks, park offices, residences, pumphouses, warehouses, barracks, maintenance shops, visitor centers, etc. These facilities must be properly maintained to continually provide visitors a safe and high quality experience.

The Facility Inventory and Inspection Program (FIIP) is a computer-based system used to track the condition, maintenance needs, and repair costs of every building in the state parks system. A principal objective of FIIP is to identify deficiencies that may create a risk to health, or have the potential for fire or risk of injury or death. Other objectives are to identify accessibility deficiencies and other significant maintenance-related deficiencies.

During a field evaluation of each facility, deficiencies are given priority ratings of critical, serious, or minor. The deficiencies are classified in nine basic categories: site (the grounds and walkways surrounding the building); exterior envelope; interior envelope; fire/life safety; handicapped accessibility; public health; heating/ventilation/air conditioning (HVAC); plumbing; and electrical.

The field evaluation begins with an inventory of all structures in the park. The results of the inventory are presented using the building name and state property numbers as identification (Table VII-1 and Figure VII-1). Next, the types of repairs and repair costs are listed for each building. Finally, the cost summary for the park is given using the nine basic categories of repairs (e.g. exterior envelope) and the three levels of deficiencies (critical, serious, and minor).

Table VII-1. Eno River State Park Building Inventory

<u>NAME</u>	<u>CODE</u>	<u>IN USE</u>	<u>BUILDING</u>
025001	Piper-Cox House	Y	
025002	Tool Shed	N	
025003	Tractor Shed	Y	
025004	Lawn Mower Shed	Y	
025005	Wilderness Shelter Log Cabin	Y	
025006	Shop	Y	
025007	Pit Toilet	Y	
025008	Park Office	Y	
025009	Superintendent's Residence	Y	
025010	Pumphouse	Y	
025011	YACC Shack	Y	
025012	Pit Toilet	Y	
025013	Pit Toilet	Y	
025017	Well Shelter	Y	
025018	Ranger Residence	Y	
025019	Vehicle Repair Shed	Y	
025020	Ranger Residence	N	
025021	Shed at Open Air Rd Residence	N	
025022	Storage Building, Open Air Road	Y	
025023	Wellhouse, Open Air Road	Y	
025024	Picnic Shelter, Cole Mill Road	Y	
025025	Vault Toilet near Shelter	Y	
025026	Vault Toilet near Trail Head	Y	
025027	Picnic Shelter A	Y	
025028	Picnic Shelter B	Y	
025029	Picnic Shelter C	Y	
025031	Pit Privy B	Y	
025033	Pit Privy D	Y	
025034	Wellhouse, Open Air Camp	Y	
025035	Open Air Camp Residence	Y	
025036	Storage Shelter	Y	
025037	Well Shelter	Y	
025038	Vehicle Storage Shed	Y	
025039	Fuel Shelter	N	
025040	Occoneechee Mtn. Residence	Y	
025041	Picnic Shelter at Cole Mill Access	Y	
025042	Picnic Shelter at Few's Access	Y	
025043	Toilet Building at Few's Access	Y	
025044	Cabelands Ranger Residence	Y	
025045	Cabelands Superintendent Residence	Y	
025046	Cabelands Garage	Y	
025047	Cabelands Seasonal Employee Residence	Y	

ENO RIVER STATE PARK STATUS OF FACILITIES

Buildings at Eno River are in good condition. Many buildings require no work at all, and only the Piper-Cox House requires work totaling over \$10,000. Renovation of the Piper-Cox house (001) is not addressed in this report since an architecture firm has been contracted to design and oversee this work which is nearing completion. Buildings requiring no repairs are not listed below. Repair needs listed include work needed to meet accessibility standards.

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
025-002	Tool Shed		337
	Historical evaluation		337
025-005	Wilderness Shelter Log Cabin		\$5,061
	Replace deck and porch		4,050
	Replace log poles		1,011
025-006	Shop		1,275
	Remove underground tank, remediate soil, backfill		1,215
	Replace damaged acoustical tile		60
025-007	Pit Toilet		75
	Replace shingles		75
025-008	Park Office		3,294
	Rework parking to meet accessibility standards		825
	Install wood wedges at doors for accessibility		84
	Remove and replace concrete path for accessibility		675
	Remount paper towel dispensers, lower mirrors, Replace urinal		915
	Install accessible water fountain		795
025-010	Pumphouse		601
	Replace door		293
	Insulate water pipes		308
025-011	YACC Shack	1,350	
	Demolish		
025-018	Ranger Residence		75
	Electrical outlet repair/install GFCI		75
025-023	Wellhouse, Open Air Road		105

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
	Add heat to building		105
025-024	Picnic Shelter, Cole Mill Road		248
	Replace H/A sign and post and mark access aisle		120
	Add handrail to path near shelter		128
025-025	Vault Toilet near Shelter		255
	Lower urinal, add grab bars		255
025-028	Picnic Shelter B		570
	Replace damaged doors		570
025-029	Picnic Shelter C		690
	Paint Deck		600
	Regrade on North side of building		90
025-031	Pit Privy B		128
	Repaint siding		128
025-034	Wellhouse, Open Air Camp		1,051
	Add radiant wall heat or heat lamp		105
	Repair copper piping		488
	Replace damaged roof decking		128
	Replace damaged rafters		135
	Replace roofing		195
025-035	Open Air Camp Residence		3,932
	Remove above ground tank		750
	Remove tree by house		188
	Replace crawl space door		75
	Replace kitchen, bath outlets with GFCI		180
	Add gutters, down spouts and splash blocks		938
	Replace acoustical tile		38
	Install fiberglass batt insulation under floor		1,508
	Add gravel to driveway		255
025-040	Oconeechee Mountain Residence		32,790

BLDG #	BUILDING NAME / WORK NEEDED	DEMOLITION COST	REPAIR COST
	Replace all windows with insulated windows		6,675
	Rewire entire house to current standards		6,000
	Replace panel box		1,800
	Replace dishwasher and wire		750
	Replace range		1,020
	Add siding to porch addition and paint		780
	Remove shingles, replace deteriorated decking and re-shingle		405
	Scrape and repaint roof soffit		720
	Repair heating/cooling unit wiring		120
	Replace/repair broken screens		420
	Install range hood in kitchen		525
	Remove bricks, re-grade walkway, replace brick		675
	Remove and replace carpet and asphalt tile		3,375
	Repair wallboard and repaint interior		705
	Clean and repaint ceilings		495
	Replace water and waste plumbing		3,450
	Replace toilet, lavatory and tub/shower		4,500
	Grade driveway and add gravel		375
	TOTAL	\$ 1,350	\$ 63,492

**FACILITY REPAIR NEEDS COST SUMMARY
FOR ENO RIVER STATE PARK**

DEFICIENCY CATEGORY	PRIORITY 1 (CRITICAL)	PRIORITY 2 (SERIOUS)	PRIORITY 3 (MINOR)	CATEGORY SUBTOTAL
Site	1,350	900	3,195	5,445
Exterior Envelope	0	19,945	1,903	21,848
Interior Envelope	0	6,083	98	6,181
Fire/Life Safety	0	0	0	0
Handicapped Access	0	3,797	0	3,797
Public Health	0	0	0	0
HVAC	0	5,685	0	5,685
Plumbing/Utility	1,965	8,438	308	10,711
Electrical	6,000	3,825	0	9,825
TOTALS:	9,315	48,673	5,504	63,492

Deficiencies that are a fire threat or threat to life, safety, or the health of an individual are considered to be "critical." A "serious" deficiency is one that is not considered a fire threat or threat to life or safety, but which could cause further damage to the structure if left uncorrected. This category usually includes building code violations. "Minor" deficiencies are those requiring general maintenance and repair.

Facility repair needs for Eno River and Occoneechee Mountain are current as of the last facility inspection, December of 1998.

ROAD INVENTORY AND INSPECTION

Background

The Institute for Transportation Research and Education (ITRE) study in March 1990 (subsequently revised by Alan Jeffreys in March of 1997) inventoried the following roads and parking lots: 1.1 miles of paved road, .54 miles of unpaved road, 3,002 square yards of paved parking lots and 1,368 square yards of unpaved parking lots.

Fews Ford Access Area (Main Park)

Description: Roads consist of the entrance road to the day-use picnic area, Piper-Cox access road, office road, maintenance and horse trailer roads. The roadway system has .82 miles of paved road, .48 miles of unpaved roads, 3,363 square yards of paved parking lot and 875 square yards of unpaved parking lots. The entrance and office road is 20 feet wide with 4-foot shoulders. Piper-Cox Road is 18 feet wide with 3-foot shoulders. The paved roads have an 8-inch stone base with 1-1/2 inches of I-2 asphalt.

Current Conditions: The main entrance road, office road and Piper-Cox Road were expanded and paved in 2000 and are in excellent shape. The Piper-Cox House parking areas were recently paved.

Repair Needs: The office parking lot and day-use picnic area parking lot need striping. The horse trailer road and maintenance road need light grading and additional stone.

Repair Cost: Approximately \$1,000; funds to come from annual NCDOT road funds.

Cole Mill Access Area

Description: The road consists of the entrance road at the end of Old Cole Mill Road (SR 1449) that serves the day-use picnic area. The roadway system has .28 miles of paved roads and 954 square yards of paved parking lots. The two parking lots have a total of 41 spaces, including three handicap spaces. The road is 17 feet wide with four-foot shoulders. The road has a stone base of unknown depth with two inches of I-2 asphalt. The new parking lot that serves the picnic shelter has an 8-inch stone base with 1-1/2 inches of I-2 asphalt.

Current Conditions: The entrance road was resurfaced in 2000 and is now in good condition. No repairs are needed.

Pleasant Green Access Area

Description: The road consists of a short entrance road off of Pleasant Green Road that serves as a main canoe takeout point down stream from Fews Ford Access. The roadway system has .06 miles of unpaved road and a 450 square yard gravel parking lot. The road is 16 feet wide with 2-foot shoulders. The road and parking lot has a stone base of unknown depth.

Current Conditions: This area is currently leased by Duke Power to the Division of Parks and
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Recreation. The road and parking lot are in poor shape. Road maintenance funds will come from NCDOT, which currently maintains this area.

Repair Needs: The existing road and parking lot need to be widened and paved. Major grading and landscaping are needed.

Repair Cost: Until ownership of this area is given to the Division of Parks and Recreation, no large capital development should take place. The area is leased until 2010.

Cabe Lands Access Area

Description: A 15-car gravel parking lot provides river access between Fews Ford and Pleasant Green.

Current Condition: The lot is in good condition; no repairs are needed.

SEWER SYSTEM

Fews Ford Access Area

Description:

1. Office area sewer: 1,200 gallon septic tank with three 120-foot drainfield lines;
2. Superintendent's residence: 1,000 gallon septic tank with three 116-foot drainfield lines;
3. Maintenance sewer system: 1,000 gallon septic tank with an unknown number of lines;
4. Primitive group camp privy;
5. Backpack camp privy.
6. Picnic area: 4,000 gallon septic tank with a 3,000 gallon pump tank and twenty 100 ft. lines.

Current Conditions:

1. Installed in 1982: good shape;
2. Installed in 1982: good shape;
3. Age unknown: fair shape;
4. Installed prior to 1978; fair/good shape;
5. Installed 1979; fair/good shape.
6. Installed in 2001; excellent condition. Maintenance is contracted.

Repair Needs:

1. Pump out septic tank;
2. Pump out septic tank;
3. Pump out septic tank and install riser;
4. Replace with Romtec or composting unit;
5. No access; leave as is.
6. None needed.

Repair Cost:

1. \$150;
2. \$150;
3. \$500;
4. \$25,000;
5. None.
6. None.

Cole Mill Access Area

Description: Picnic area vault toilets; 2 Romtec toilets with a 750-gallon capacity.

Current Conditions: Installed in 1996: excellent condition. No repair needs.

Guess Road Ranger Residence

Description: 500 gallon fiberglass pump tank with manhole, riser and cover.

Current Conditions: Installed in 1992 and tied into Durham sewer system; good condition. No repair needs.

Ranger Residence on Open Air Camp Road

Description: Gravity outfall into city sewer.

Current Conditions: Tied into the city sewer system in 1995; good condition. No repair needs.

Ranger Residence on Sterling Road

Description: Gravity outfall into city sewer.

Current Conditions: Good; no repair needs.

Old Girl Scout Camp on Open Air Camp Road

Description: Consists of 2 pit privies.

Current Conditions: All privies are in poor shape; age is unknown.

Repair Needs: Replace with two Romtec units.

Repair Cost: \$50,000

WATER SYSTEM

Fews Ford Access Area

Description: The park is supplied by two water wells with a PVC piping distribution system of various sized piping. Well #1 is 125 feet deep and is 6-5/8 inches in diameter. It produces 40 gallons per minute and was drilled in 1981. The water is high in iron and turbidity. A commercial water softener was installed in 1991. The PVC piping distribution system consists of approximately 2,160 linear feet of 2-1/2 inch PVC, 260 linear feet of 1-1/2 inch PVC and 420 linear feet of 1 inch PVC. The system is also chlorinated. Various sizes of valves are located on the system. The well pump is a submersible pump of unknown size. Well #1 was taken off line when well #2 at the maintenance area was put into service in 2001. Well #2 is 430 ft. deep and produces 32 gallons-per-minute. The water is of good quality and sufficient to supply the Fews Ford Access Area. Two 500 gallon storage tanks provide pressure for the system.

Current Conditions: Well #2 is in good condition and supplies the area. Well #1 serves as a back up. No repairs are needed

Cole Mill Access

Description: This area is served by a 2-inch PVC piping distribution system that ties on to the City of Durham waterline on Cole Mill Road. There are approximately 1,550 linear feet of 2-inch main line with approximately 50 linear feet of 1-inch PVC piping.

Current Conditions: The waterline was installed in 1991 and is in good condition.

Repair Needs: None.

Repair Cost: None.

Guess Road Residence

Description: The residence is tied into Durham City water with 200 linear feet of 1-inch PVC waterline. The house also has a back-up well to water the garden and lawn area. The well has a jet pump of unknown age. The well depth is unknown.

Current Conditions: The water tie in to the city was done in 1992. The distribution line is in good condition.

Repair Needs: When the existing pump and tank fails, the well needs to be abandoned.

Repair Cost: \$1,000.

Ranger Residence at Open Air Camp Road

Description: The residence is served by a well of unknown depth and capacity. The well has a submersible pump of unknown size. A chlorinator and water pressure tank is included with the system. A PVC piping distribution supplies the house. This line is approximately 200 feet away.

Current Conditions: The park acquired the house in 1994 and has problems with the water quality. Lead and bacteria have been found in the water. The system has been replaced with new piping and a chlorinator and is in fair shape.

Repair Needs: Tie on to the city water line.

Repair Cost: Tie on cost is unknown.

Old Girl Scout Camp at Open Air Camp Road

Description: This area consists of a well and related polyethylene piping distribution system. The well is 6-5/8 inches in diameter; depth is unknown. The well has a submersible pump and a pump storage tank with related controls. There are approximately 500 linear feet of distribution system.

Current Conditions: The age of the system is unknown, but the whole system needs replacing if the area is to be used.

Repair Needs: Abandon the existing system and tie in to the city water system.

Repair Cost: Unknown until a variance can be obtained from the city on the road frontage requirement.

Ranger Residence at Sterling Road

Description: The ranger residence is served by a well of unknown depth and capacity.

Current Conditions: Poor

Repair Needs: The residence should tie on to city water.

Repair Costs: Unknown at this time.

ELECTRICAL SYSTEM

Fews Ford Access Area (Main Park)

Description: This area is served by a primary underground power cable distribution system. The system has 1,840 linear feet of primary underground cable with 520 linear feet of secondary underground cable with 3 pad mounted transformers. The power is supplied by Piedmont Electric Company of Hillsborough, NC.

Current Conditions: The power distribution system was installed in 1982 and is owned by the power company. The system is in good shape.

Repair Needs: None.

Repair Cost: None.

Cole Mill Access Area

Description: There is no electric power at this site.

Guess Road Residence

Description: Overhead power line with meter.

Current Conditions: The power is supplied by Duke Power Company located in Durham.

Repair Needs: Install power underground and change service riser.

Repair Cost: Lump sum electrical upgrade: \$1,000.

Old Girl Scout Camp on Open Air Camp Road

Description: An existing underground secondary electric cable supplies power to the well house and old picnic shelter.

Current Conditions: Duke Power Company, located in Durham, currently serves this area with underground power. It is unknown when this system was installed. The system is in poor condition.

Repair Needs: Power service needs to be inspected by the power company before restoring power to the area.

Repair Cost: Unknown.

Ranger Residence at Open Air Camp Road

Ranger Residence at Sterling Road

Description: Service consists of an overhead power line with a service riser.

Current Conditions: Residence is supplied power overhead by Duke Power Company. The power should remain overhead since other homes in the area are supplied overhead. No repairs are needed.

TELEPHONE SYSTEM

Fews Ford Access Area (Main Park)

Description: The phone system has five phones within the office and one in the maintenance area. There is one pay phone located outside the office underneath the covered porch. There are four dedicated phone lines to the park office (two outside lines, one MRTI, and one fax line). All residences have their own individual lines.

Current Conditions: The phone service is supplied by Verizon. No repairs are needed.

MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

The Eno River State Park Master Plan describes the long-range land acquisition and development plans for the park. The proposed development is organized into capital improvement projects. These projects were evaluated and ranked, thus creating a priority list of capital improvement projects for Eno River. The projects were combined with projects evaluated and ranked for other state park units, resulting in a priority list of capital improvement projects for the whole state parks system.

Capital improvement project rankings are based upon objectives such as promoting public health, protecting natural resources, enhancing environmental education, increasing public accessibility, and improving the park's appearance.

Part of the general management plan process included reviewing and updating the Project Priority List, a list of capital improvement projects originally compiled several years earlier using the 1979 master plan. The general management plan evaluation team considered factors such as changes in environmental regulations, the condition of existing facilities, natural heritage values, changes in recreation demand, visitor safety considerations, legislative and lease requirements, new development adjacent to the park, operational needs, and current recreation demand. Completed projects were dropped from the list and new projects were added. Changes to project scopes for various projects were also deemed necessary. The revised Project Priority List follows, along with a description of the various capital improvement projects.

Eno River Project Priority List

Rank	Description	Project Score	Total Costs
1	New maintenance building and warehouse renovation	675	\$ 707,468
2	Horse trail system improvements	659	375,169
3	Pumpstation, Cabe, Pleasant Green Access Development	649	427,147
4	Upgrade of pit privies to vault toilets (4)	625	113,682
5	Exhibits for Piper-Cox House	607	335,182
6	Lawrence Road access (land dependent)	581	131,092
7	Open air camp improvements (land dependent)	569	574,468
8	Bobbit's Hole camping and groupcamp	529	240,171
9	Office additions	522	344,016
	Total	—	3,248,395

1. New Maintenance Building/Warehouse Renovation (\$707,468) – This project will provide the basic maintenance facilities to support park operations. An old residence will be renovated to serve as a warehouse and a standard maintenance building will be constructed. The project also includes construction of a flammable storage building, vehicle wash pad and storage building, paved parking and a 10-foot-high security fence.

2. Horse Trail System Improvements (Land Dependent) (\$375,169) – This project would develop approximately 12 miles of horse trail and includes access road paving, improving a creek crossing, improving two river crossings, trailer parking, one foot bridge on ridge trails and signage. A small amount of land acquisition is needed to connect the trails.

3. Pump Station, Cabe, Pleasant Green Access Development (\$427,147) – The 1991 development of a city park nearby has lessened the need for the state to provide restrooms and picnic sites at the pump station, and so these projects elements were deleted from this project. The city park's restrooms are located approximately 800 feet from the pump station parking lot. A two-seat vault toilet facility has been added to the original project scope. The project includes 200 linear feet of access road, bus and car parking, a gate, 7,500 linear feet of trail, and interpretive displays at the trailhead.

Park staff have continued to make improvements, thus lowering capital improvement needs at access areas along the river. Development needed at Cabe Lands and Pleasant Green accesses was combined with the pumpstation project rather than remain a separate project. At Cabe Land and Pleasant Green, a 1-seat Romtec toilet will be added at both locations to serve visitors and address public health needs. A canoe launch, gate, paved parking and signage will be constructed at Pleasant Green. The project name was changed to reflect project scope changes.

4. Upgrade of Pit Privies to Vault Toilets (\$133,681) – This project will upgrade four pit privies at walk-in campsites by installing Clevis Multrum type mulching toilets. The toilets will need to be brought in by helicopter. Two toilets will be located at the Open Air Camp and two at Few's Ford.
5. Exhibits for the Piper-Cox House (\$335,182) – This new project will provide for design and construction of interactive exhibits for the Piper-Cox House. A Romtec single seat toilet and funds for landscaping are included.
6. Lawrence Road Access (\$131,092) – The Lawrence Road Access will provide river access and a trailhead facility. The project includes construction of an access road, gravel parking for 20 cars, canoe launch, signs, a gate, and exhibits. The project is dependent upon additional land acquisition.
7. Open Air Camp Improvements (Land Dependent) (\$574,468) – Project scope includes development of a two-mile interpretive trail, canoe launch and parking, car and bus parking, open grassy area, 30-person classroom and improvements to the existing lodge. The area, once developed, should help meet environmental education and training needs.
8. Bobbits Hole Camping and Group Camp (\$240,171) – The project would construct an access road to the planned group camp in the Ridge Trail area, campsites, hiking trail access, signage and two mulching toilets, one of which would need to be flown in.
9. Office Additions (\$344,016) – Additional office space and parking are needed at the park office. This project expands the staff area and adds a toilet, constructs public toilets, adds a security system and increases car and bus parking.

Occoneechee Mountain Capital Improvements

One capital improvement project to provide for initial general development at Occoneechee Mountain is proposed. The project will include development of an access road, handicapped access to the visitor contact station and pier, road improvements to the maintenance area, contact station renovation, entrance gate, equipment storage shed, fishing pier at the pond, relocation of the vault toilet, parking lot, ranger residence, well house and chlorination equipment, water distribution lines, area light at the gate and underground electric service. A conceptual plan of the proposed initial development follows.

Occoneechee Mountain Project Priority List

Rank	Description	Project Score	Total Costs
1	General Development	672	\$ 1,144,658
	Total:	—	1,144,658

OCCONEECHEE MOUNTAIN STATE PARK CONCEPTUAL PLAN

6/99

