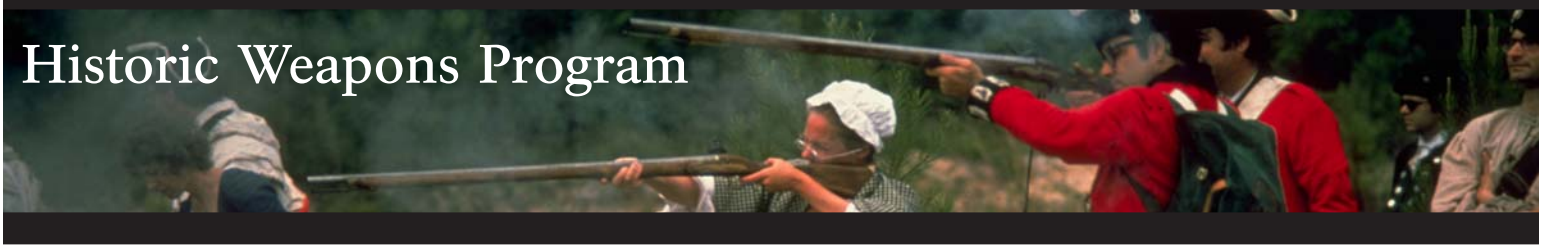
National Park Service
U.S. Department of the Interior

Division of Interpretation and Education

Historic Weapons Program



Black Powder Storage and Handling, Range Safety, and Weapons Storage Checklist

Park:_____ **Inspector:**_____ **Date:**_____

GENERAL PROVISIONS

☐ Only potassium nitrate-based, sporting grade black powder is used in demonstrations (xx.1.3).

☐ Magazine storage is under the supervision of an officially trained and certified career, career-conditional or term employee, 21 years of age or older (xx.2.1).

☐ Magazine storage responsibilities have been designated in writing by the Superintendent (xx.2.1).

☐ Temporary absences of the responsible employee shall be delegated in writing to act during this period. (xx.2.2).

☐ "Inhabited buildings" are not used for magazines or for loading operations (xx.2.5).

☐ Historic structures used for NPS Class 2 magazines will be supported in writing, approved by the Regional Director, and be on file in the park (xx.2.6).

NPS CLASS 1 MAGAZINE

(Outdoor Storage of More than 50 pounds)

☐ Location of NPS Class 1 Magazine is consistent with the American Table of Distance for Storage of Explosives.

☐ "NO SMOKING" signs are clearly marked around the magazine, or within any room containing an indoor magazine(xx.2.8.b).

☐ No openings are present except door and ventilation.

☐ Adequate drainage provided.

☐ Masonry construction: Hollow masonry units filled.

☐ Fabricated metal wall construction: Not less than 14 gauge thickness. Walls lined inside with brick or hardwood no less than 4 inches, or sand 6 inches of sand fill.

☐ Wood frame construction: Exterior is covered with iron or aluminum not less than 26 gauge. Walls to be no less than six inches thick, filled with sand or weak concrete.

☐ Interior walls are constructed of, or covered with a non-sparking material.

☐ Floors are constructed of, or covered with a non-sparking material.

☐ Foundation constructed of masonry. If wood piers are used, the space under the building is enclosed with metal.

☐ Except for fabricated metal roofs, the outer roof is to be covered with no less than 26 gauge iron or aluminum, fastened to at least 7/8th inch sheathing.

☐ Doors to be constructed of not less than ¼ inch steel plate lined with two inches hardwood.

☐ Hinges and hasps attached by welding, bolting or riveting. Hinges and hasps cannot be removed when door is closed and locked.

☐ Two locks are required:
(2) mortise locks, or
(2) padlocks with 3/8 in. hasps on separate hasps, or
(1) mortise lock and (1) padlock, or
A mortise lock that requires two keys to open, or
A three-point lock.

☐ If padlocks are used, they must be covered with ¼ inch steel hoods.

☐ Vents are screened. Side wall vents must be offset.

☐ No exposed metal on interior. All ferrous metal nail heads are covered.

☐ Lighting is provided by battery activated safety lantern. Electric lighting must meet "National Electric Code" Class III installations (hazardous areas).

☐ Dry grass, brush, small trees or rubbish is kept at least 25 feet in all directions from magazine.

☐ Volatile materials are kept at least 50 feet from magazine.

NPS CLASS 2 MAGAZINES

(Indoor Storage of Less Than 50 pounds)

☐ Indoor storage of 50 pounds or less of black powder will be in a National Park Service Class 2 Magazine (xx.2.4).

☐ "NO SMOKING" signs are clearly marked around the magazine, or within any room containing an indoor magazine (xx.2.8.b).

☐ *Wood Magazine:*

☐ Constructed of 2-inch hardwood and covered with metal no less than 20 gauge.

☐ All nails on interior counter sunk and filled.

☐ Door overlaps sides by at least one inch.

☐ Hinges and hasp welded, riveted or bolted

☐ Padlock has 3/8 inch shackle.

☐ Painted red with 3 inch letters on sides and top: "EXPLOSIVES Keep Fire Away."

☐ *Metal Magazine:*

☐ Constructed of no less than 12 gauge steel, lined with at least ½ inch plywood or hardboard.

☐ Doors must overlap sides by at least one inch.

☐ Hinges and hasp welded, riveted or bolted

☐ Padlock has 3/8 inch shackle.

☐ Painted red with 3 inch letters on sides and top: "EXPLOSIVES Keep Fire Away."

Storage

☐ Magazines are checked every 10 days (xx.2.8.a).

☐ Pass boxes are used to transport black powder from the magazine. (xx.2.7.a)

☐ Unused ammunition is returned to the magazine at the end of the day's demonstrations (xx.2.7.c)

☐ Powder containers are dated (xx.2.8.c).

☐ Powder is consumed within two years (xx.2.8.d).

☐ Powder inventory log is kept current (xx.2.8.e).

☐ Containers are not placed directly against interior wall or vent.

☐ Containers are placed so content identification is visible for inspection and inventory.

☐ Magazines are kept clean and floors are swept.

Ammunition Loading Area

☐ The ammunition loading area is in an uninhabited building located at least 50 feet from the magazine (xx.2.9.a).

☐ The ammunition area is provided with a non-sparking work table or bench, adequate spark-free lighting, non-sparking floor surface and entrance control by the person handling the black powder (xx.2.9.b).

☐ The ammunition loading area is clean with no accumulation of black powder dust (xx.2.9.c).

☐ Exposed powder is kept to one pound or enough for one artillery round (xx.2.10.a).

☐ A pass box is used to protect any additional powder in the loading area (xx.2.10.b).

☐ Loaded ammunition is placed in a pass box as units are completed (xx.2.10.b)

☐ Ammunition components ("cylinders") are completed before powder is brought to the loading area (16.2.10.c).

AMMUNITION PREPARATION

☐ Small arms paper cartridges are made strictly following the NPS standards and powder loads (xx.6.1.a).

☐ Unused cartridges returned to the magazine (xx.6.1.b).

☐ Paper small arms cartridges are not stored more than 60 days from date of manufacture (xx.6.1.c).

☐ Artillery cartridges are made strictly following the NPS standards and powder loads (6.2.a).

☐ Artillery cartridges are not stored more than 5 days from date of manufacture (xx.6.2.b)

☐ Loose powder is never permitted in a demonstration area (xx.6.3).

☐ Damaged cartridges are destroyed by soaking in water until the powder is dissolved and the remains are disposed in a safe place (xx.6.4.a).

☐ No torn or damaged cartridges are kept in the magazine (xx.6.4.b).

☐ Only slow match, quill primers, and approved commercially available friction primers or kits are used (xx.6.5).

RANGE SAFETY

☐ Local zoning codes and authorities have been consulted before designing demonstration ranges on park lands. Regulations and local sentiment regarding noise or potential hazards of blank firing have been considered before the program is implemented (xx.5.1.a).

☐ Small arms and artillery ranges comply with NPS standards (xx.5.1.b).

☐ The suitability of park lands has been evaluated(xx.5.2).

☐ Physical barriers are used to keep visitors at the safe distances if natural features are inadequate (xx.7.1.a).

☐ Means are established so that no visitor will be allowed in front of a line perpendicular to the muzzle of a weapon during the demonstration (xx.7.1.b).

WEAPONS STORAGE AND SECURITY

☐ Weapons are treated as sensitive property as defined in Director's Orders for Property Management and the storage standards described in the Historic Weapons Program Manual (xx.3.1.a).

☐ Weapons are stored in a locked cabinet when not in use (xx.3.1.b).

☐ Access to weapons cabinets is limited to those employees requiring access to the storage area (xx.3.1.c).

☐ Structures used to store historic weapons are be guarded with a monitored intrusion detection system (xx.3.2).

☐ Weapons will have permanent identification markings placed in an inconspicuous location (xx.3.3.a).

☐ An inventory of firearms is maintained by serial number, manufacture, model, NPS property number, barrel length, caliber, and location of identification marking on the firearm (xx.3.3.b).

AMERICAN TABLE OF DISTANCES FOR STORAGE OF EXPLOSIVES (December 1910)

Revised and Approved by the Institute of Makers of Explosives - July 1991

Quantity of Explosives		Distances in Feet							
Pounds Over	Pounds Not Over	Inhabited Buildings		Public hwys with traffic volume of 3000 or less vehicles/day		Passenger railways-public hwys with traffice volume of more than 3000 vehicles/day		Separation of Magazines	
		Barricaded	Unbarricaded	Barricaded	Unbarricaded	Barricaded	Unbarricaded	Barricaded	Unbarricaded
0	5	70	140	30	60	51	102	6	12
5	10	90	180	35	70	64	128	8	16
10	20	110	220	45	90	81	162	10	20
20	30	125	250	50	100	93	186	11	22
30	40	140	280	55	110	103	206	12	24
40	50	150	300	60	120	110	220	14	28
50	75	170	340	70	140	127	254	15	30
75	100	190	380	75	150	139	278	16	32
100	125	200	400	80	160	150	300	18	36
125	150	215	430	85	170	159	318	19	38
150	200	235	470	95	190	175	350	21	42
200	250	255	510	105	210	189	378	23	46
250	300	270	540	110	220	201	402	24	48
300	400	295	590	120	240	221	442	27	54
400	500	320	640	130	260	238	476	29	58
500	600	340	680	135	270	253	506	31	62
600	700	355	710	145	290	266	532	32	64
700	800	375	750	150	300	278	556	33	66
800	900	390	780	155	310	289	578	35	70
900	1000	400	800	160	320	300	600	36	72
1000	1200	425	850	165	330	318	636	39	78