WHAT IS CLAIMED IS:

1. A storage device comprising:

a nonvolatile memory device;

a memory controller configured to determine a first memory block of the nonvolatile memory device, which is targeted for a read reclaim operation, and to read first target data from a target area of the first memory block; and

a buffer memory in which the first target data are stored, wherein

the memory controller copies data stored in the first memory block, including the first target data, to a second memory block of the nonvolatile memory device and reads at least a portion of the first target data stored in the buffer memory in response to a read request corresponding to at least a portion of the target area, wherein the read request is received during the read reclaim operation.

2. The storage device of claim 1, wherein the target area includes a page, a read count of which is not smaller than a reference read count.

3. The storage device of claim 1, wherein the target area includes a second page adjacent to a first page, wherein a read count of the first page is not smaller than a reference read count.

4. The storage device of claim 1, wherein the target area includes a page including correctable cells, a number of which is not smaller than a first reference value, or a page on which an operation for correction of the correctable cells is performed as much as a second reference value or more.

5. The storage device of any one of claims 1 to 4, wherein when a read request for the first memory block is not received, the memory controller detects the target area.

6. The storage device of any one of claims 1 to 5, wherein when the memory controller performs a read operation on at least one page included in the first memory block, the memory controller detects the target area.

7. The storage device of any one of claims 1 to 6, wherein:

the first target data are stored to a read cache memory included in the buffer memory, and

the memory controller determines a third memory block of the nonvolatile memory device, which is targeted for a second read reclaim operation, reads second target data from a second target area of the third memory block, and compares a size of the second target data and a free space of the read cache memory.

8. The storage device of claim 7, wherein when the free space is not smaller than the size of the second target data, the memory controller writes the second target data to the read cache memory.

9. The storage device of claim 7, wherein when the free space is smaller than the size of the second target data, the memory controller writes the second target data to a fourth memory block of the nonvolatile memory device.

10. The storage device of claim 9, wherein a number of bits per unit memory cell of the fourth memory block is smaller than a number of bits per unit memory cell of the first to third memory blocks.

11. The storage device of claim 7, wherein when the free space is smaller than the size of the second target data, the memory controller copies the first target data to a fourth memory block of the nonvolatile memory device and writes the second target data to the read cache memory.

12. The storage device of claim 7, wherein when the free space is smaller than the size of the second target data, the memory controller determines data to be evicted from the read cache memory, based on read counts corresponding to data stored in the read cache memory.

13. The storage device of claim 7, wherein when the free space is smaller than the size of the second target data, the memory controller determines data to be evicted from the

read cache memory, based on an order of read reclaim operations corresponding to data stored in the read cache memory.

14. The storage device of claim 7, wherein when the free space is smaller than the size of the second target data, the memory controller determines data to be evicted from the read cache memory, based on corrected error bits of data stored in the read cache memory.

15. The storage device of any one of claims 1 to 14, wherein the memory controller blocks access to the target area after the first target data are stored to the buffer memory.

16. A storage device comprising:

a nonvolatile memory device including a first memory block and a second memory block;

a memory controller configured to detect a target area of the first memory block, based on a result of comparing a read count and a reference read count; and

a buffer memory in which target data corresponding to the target area are stored, wherein

after the target data are stored to the buffer memory, the memory controller reads at least a portion of the target data stored in the buffer memory in response to a read request corresponding to at least a portion of the target area, wherein the read request is received during a read reclaim operation.

17. The storage device of claim 16, wherein after the target data are stored to the buffer memory, the memory controller copies data stored in the first memory block to the second memory block.

18. The storage device of claim 16 or claim 17, wherein the target area is detected in response to a read request of a host.

19. A storage device comprising:

a nonvolatile memory device including a first memory block and a second memory block;

a memory controller configured to detect a target area of the first memory block, based on an operation of correcting an error bit; and

a buffer memory in which target data corresponding to the target area are stored, wherein

after the target data are stored to the buffer memory, the memory controller reads at least a portion of the target data stored in the buffer memory in response to a read request corresponding to at least a portion of the target area, wherein the read request is received during a read reclaim operation.

20. The storage device of claim 19, wherein the memory controller calculates a number of correctable cells or a number of times that a correction operation is performed on the correctable cells, based on the operation of correcting the error bit, and detects the target area based on a result of the calculation.