Problem

1. A&C Distributors is a company that represents many outdoor products companies and schedules deliveries to discount stores, garden centers, and hardware stores. Currently, scheduling needs to be done for two lawn sprinklers, the Water Wave and Spring Shower models. Requirements for shipment to a warehouse for a national chain of garden centers are shown below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Shipping Capacity | Product | Minimum Requirement | Unit Cost  to Ship | Per Unit  Inventory Cost |
| March | 8000 | Water Wave | 3000 | .30 | .06 |
|  |  | Spring Shower | 1800 | .25 | .05 |
| April | 7000 | Water Wave | 4000 | .40 | .09 |
|  |  | Spring Shower | 4000 | .30 | .06 |
| May | 6000 | Water Wave | 5000 | .50 | .12 |
|  |  | Spring Shower | 2000 | .35 | .07 |

Let Sij be the number of units of sprinkler i shipped in month j, where i = 1 or 2, and j = 1, 2, or 3. Let Wij be the number of sprinklers that are at the warehouse at the end of a month, in excess of the minimum requirement.

**Formulate and Excel Solve, the whole problem, provide the Excel file.**