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| **Runoff Curve Numbers for Urban Areas** | | | | | |
| **Cover Type and Hydrologic Condition** | **Average Percent Impervious Area** | **A** | **B** | **C** | **D** |
| Open space (lawns, parks, golf courses, cemeteries, etc.) |  |  |  |  |  |
| * Poor condition (grass cover < 50%) |  | 68 | 79 | 86 | 89 |
| * Fair condition (grass cover 50% to 75%) |  | 49 | 69 | 79 | 84 |
| * Good condition (grass cover > 75%) |  | 39 | 61 | 74 | 80 |
| Paved parking lots, roofs, driveways, etc. (excluding right-of-way) |  | 98 | 98 | 98 | 98 |
| Streets and roads: |  |  |  |  |  |
| * Paved; curbs and storm drains (excluding right-of-way) |  | 98 | 98 | 98 | 98 |
| * Paved; open ditches (including right-of-way) |  | 83 | 89 | 92 | 93 |
| * Gravel (including right-of-way) |  | 76 | 85 | 89 | 91 |
| * Dirt (including right-of-way) |  | 72 | 82 | 87 | 89 |
| Western desert urban areas: |  |  |  |  |  |
| * Natural desert landscaping (pervious areas only) |  | 63 | 77 | 85 | 88 |
| * Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) |  | 96 | 96 | 96 | 96 |
| Urban districts: |  |  |  |  |  |
| * Commercial and business | 85 | 89 | 92 | 94 | 95 |
| * Industrial | 72 | 81 | 88 | 91 | 93 |
| Residential districts by average lot size: |  |  |  |  |  |
| * 1/8 acre or less (town houses) | 65 | 77 | 85 | 90 | 92 |
| * 1/4 acre | 38 | 61 | 75 | 83 | 87 |
| * 1/3 acre | 30 | 57 | 72 | 81 | 86 |
| * 1/2 acre | 25 | 54 | 70 | 80 | 85 |
| * 1 acre | 20 | 51 | 68 | 79 | 84 |
| * 2 acres | 12 | 46 | 65 | 77 | 82 |
| Developing urban areas: |  |  |  |  |  |
| Newly graded areas (pervious areas only, no vegetation) |  | 77 | 86 | 91 | 94 |
| **Notes:** Values are for average runoff condition, and Ia = 0.2S. The average percent impervious area shown was used to develop the composite RCNs. Other assumptions are: impervious areas are directly connected to the drainage system, impervious areas have a RCN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. | | | | | |

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| **Runoff Curve Numbers for Cultivated Agricultural Land1** | | | | | | | |
| **Cover Type** | **Treatment2** | **Hydrologic Condition3** | **A** | **B** | | **C** | **D** |
| Fallow | Bare soil |  | 77 | 86 | | 91 | 94 |
|  | Crop residue | Poor | 76 | 85 | | 90 | 93 |
|  | cover (CR) | Good | 74 | 83 | | 88 | 90 |
| Row Crops | Straight row (SR) | Poor | 72 | 81 | | 88 | 91 |
|  |  | Good | 67 | 78 | | 85 | 89 |
|  | SR + CR | Poor | 71 | 80 | | 87 | 90 |
|  |  | Good | 64 | 75 | | 82 | 85 |
|  | Contoured (C) | Poor | 70 | 79 | | 84 | 88 |
|  |  | Good | 65 | 75 | | 82 | 86 |
|  | C + CR | Poor | 69 | 78 | | 83 | 87 |
|  |  | Good | 64 | 74 | | 81 | 85 |
|  | Contoured & terraced (C&T) | Poor | 66 | 74 | | 80 | 82 |
|  |  | Good | 62 | 71 | | 78 | 81 |
|  | C&T + CR | Poor | 65 | 73 | | 79 | 81 |
|  |  | Good | 61 | 70 | | 77 | 80 |
| Small grain | SR | Poor | 65 | 76 | | 84 | 88 |
|  |  | Good | 63 | 75 | | 83 | 87 |
|  | SR + CR | Poor | 64 | 75 | | 83 | 86 |
|  |  | Good | 60 | 72 | | 80 | 84 |
|  | C | Poor | 63 | 74 | | 82 | 85 |
|  |  | Good | 61 | 73 | | 81 | 84 |
|  | C + CR | Poor | 62 | 73 | | 81 | 84 |
|  |  | Good | 60 | 72 | | 80 | 83 |
|  | C&T | Poor | 61 | 72 | | 79 | 82 |
|  |  | Good | 59 | 70 | | 78 | 81 |
|  | C&T + CR | Poor | 60 | 71 | | 78 | 81 |
|  |  | Good | 58 | 69 | | 77 | 80 |
| Close-seeded | SR | Poor | 66 | 77 | | 85 | 89 |
| or broadcast |  | Good | 58 | 72 | | 81 | 85 |
| Legumes or C |  | Poor | 64 | 75 | | 83 | 85 |
| Rotation |  | Good | 55 | 69 | | 78 | 83 |
| Meadow | C&T | Poor | 63 | 73 | | 80 | 83 |
|  |  | Good | 51 | 67 | | 76 | 80 |
| **Notes:** 1 Values are for average runoff condition, and Ia = 0.2S.  2Crop residue cover applies only if residue is on at least 5 percent of the surface throughout the year.  3Hydrologic condition is based on a combination of factors affecting infiltration and runoff: density and canopy of vegetative areas, amount of year-round cover, amount of grass or closed-seeded legumes in rotations, percent of residue cover on land surface (good > 20 percent), and degree of roughness.  **Poor:** Factors impair infiltration and tend to increase runoff.  **Good:** Factors encourage average and better infiltration and tend to decrease runoff. | | | | | | | |
| **Runoff Curve Numbers for Other Agricultural Lands** | | | | | | | | | | | | |
| **Cover Type** | | | | | **Hydrologic Condition** | | | | **A** | **B** | **C** | **D** |
| Pasture, grassland, or range-continuous forage for grazing | | | | | Poor  Fair  Good | | | | 68  49  39 | 79  69  61 | 86  79  74 | 89  84  80 |
| Meadow – continuous grass, protected from grazing and generally mowed for hay | | | | |  | | | | 30 | 58 | 71 | 78 |
| Brush – brush-weed-grass mixture, with brush the major element | | | | | Poor  Fair  Good | | | | 48  35  30 | 67  56  48 | 77  70  65 | 83  77  73 |
| Woods – grass combination (orchard or tree farm) | | | | | Poor  Fair  Good | | | | 57  43  32 | 73  65  58 | 82  76  72 | 86  82  79 |
| Woods | | | | | Poor  Fair  Good | | | | 45  36  30 | 66  60  55 | 77  73  70 | 83  79  77 |
| Farmsteads – buildings, lanes, driveways, and surrounding lots | | | | |  | | | | 59 | 74 | 82 | 86 |
| **Notes:** Values are for average runoff condition, and Ia = 0.2S.  **Pasture:** Poor is < 50% ground cover or heavily grazed with no mulch, Fair is 50% to 75% ground cover and not heavily grazed, and Good is >75% ground cover and lightly or only occasionally grazed.  **Meadow:** Poor is <50% ground cover, Fair is 50% to 75% ground cover, Good is >75% ground cover.  **Woods/grass:** RCNs shown were computed for areas with 50 percent grass (pasture) cover. Other combinations of conditions may be computed from RCNs for woods and pasture.  **Woods:** Poor is forest litter, small trees, and brush destroyed by heavy grazing or regular burning. Fair is woods grazed but not burned and with some forest litter covering the soil. Good is woods protected from grazing and with litter and brush adequately covering soil. | | | | | | | | | | | | |

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| **Runoff Curve Numbers for Arid and Semi Arid Rangelands** | | | | | |
| **Cover Type** | **Hydrologic Condition** | **A** | **B** | **C** | **D** |
| Herbaceous—mixture of grass, | Poor |  | 80 | 87 | 93 |
| weeds, and low-growing brush, | Fair |  | 71 | 81 | 89 |
| with brush the minor element | Good |  | 62 | 74 | 85 |
|  |  |  |  |  |  |
| Oak-aspen—mountain brush | Poor |  | 66 | 74 | 79 |
| mixture of oak brush, aspen, | Fair |  | 48 | 57 | 63 |
| mountain mahogany, bitter brush, | Good |  | 30 | 41 | 48 |
| maple, and other brush |  |  |  |  |  |
| Pinyon-juniper—pinyon, juniper, | Poor |  | 75 | 85 | 89 |
| or both; grass understory | Fair |  | 58 | 73 | 80 |
|  | Good |  | 41 | 61 | 71 |
| Sagebrush with grass understory | Poor |  | 67 | 80 | 85 |
|  | Fair |  | 51 | 63 | 70 |
|  | Good |  | 35 | 47 | 55 |
| saltbush, greasewood, creosote- | Poor | 63 | 77 | 85 | 88 |
| bush, blackbrush, bursage, palo | Fair | 55 | 72 | 81 | 86 |
| verde, mesquite, and cactus | Good | 49 | 68 | 79 | 84 |
|  |  |  |  |  |  |
| **Notes.** Values are for average runoff condition, and Ia = 0.2S.  Hydrologic Condition: Poor is <30% ground cover (litter, grass, and brush overstory), air is 30% to 70% ground cover, Good is >70% ground cover.  Curve numbers for Group A have been developed only for desert shrub. | | | | | |

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| **Rainfall Groups for Antecedent Soil Moisture Conditions during Growing and Dormant Seasons** | | | |
| **Antecedent Condition** | **Description** | **Growing Season**  **5-Day Antecedent Rainfall** | **Dormant Season**  **5-Day Antecedent Rainfall** |
| Dry AMC I | An optimum condition of watershed soils, where soils are dry but not to the wilting point, and when satisfactory plowing or cultivation takes pace | Less than 1.4 in. or 35 mm | Less than 0.05 in. or 12 mm |
| Average AMC II | The average case for annual floods | 1.4 in. to 2 in. or  35 to 53 mm | 0.5 to 1 in. or  12 to 28 mm |
| Wet AMC III | When a heavy rainfall, or light rainfall and low temperatures, have occurred during the five days previous to a given storm | Over 2 in. or 53mm | Over 1 in. or 28 mm |