annual precipitation is 12 to 18 inches. The average annual air temperature is 47 to 50 degrees F, and the average frost-free period is 110 to 130 days.

Typically, the surface layer is light brownish gray clay loam about 7 inches thick. The subsoil is light brownish gray clay loam about 15 inches thick. The substratum to a depth of 60 inches or more is light brownish gray clay loam.

Included in this unit are about 15 percent Arboles silty clay loam and small areas of Mikim loam and Bodot clay.

Permeability of this Sili soil is moderately slow. Effective rooting depth is 60 inches or more. Available water capacity is high. Runoff is medium, and the hazard of erosion is moderate.

The unit is used mainly for irrigated and nonirrigated field crops, for irrigated pasture and as rangeland. Barley, oats, and alfalfa are the main irrigated crops. Wheat is the main nonirrigated crop.

In irrigated areas, the main concerns of management are controlling water erosion, maintaining the organic matter content and fertility in the surface layer, and properly using irrigation water. Incorporating crop residue into the soil increases the water intake rate, improves tilth, reduces erosion, and helps to maintain the organic matter content content and fertility. The use of fertilizer helps to maintain the productivity and fertility of the soil. Grain and grasses respond to nitrogen, and legumes respond to phosphorus. Land smoothing may be needed for a more uniform distribution of irrigation water. Irrigation methods suitable for use on this unit are furrow, corrugation, and sprinkler systems. Furrow irrigation is suited to row crops. Sprinkler irrigation is well suited to most crops. Corrugation irrigation is suited to small grain, alfalfa, and pasture. Regardless of the irrigation method used, water should be applied carefully to minimize runoff and erosion.

In nonirrigated cropland areas, management is needed to control erosion, to conserve moisture, and to maintain the fertility of the soil. Using stubble mulch tillage and returning crop residue to the soil reduce runoff and erosion and conserve moisture. Chiseling or subsoiling can be used to break up the tillage pan and thus improve the water intake rate. Tillage should be kept to a minimum.

The native vegetation on this unit is mainly Indian ricegrass, junegrass, western wheatgrass, big sagebrush, pinyon, and Rocky Mountain juniper. Proper grazing use as part of a planned grazing system helps to maintain the quality and quantity of the preferred rangeland vegetation. Seeding and deferring grazing facilitate revegetation of areas depleted by heavy grazing, cultivation, and other disturbances. Mechanical or chemical brush control followed by seeding to adapted grasses improves areas that support dense stands of sagebrush. Developing livestock watering facilities, fencing, and deferring grazing improve the distribution of grazing and help to maintain the condition of the rangeland. Contour furrowing and pitting increase the water intake rate and reduce runoff. These practices are especially effective in rangeland areas in poor to fair condition.

This unit generally is suited to windbreaks and environmental plantings. It is limited mainly by lack of sufficient rainfall in summer. Supplemental irrigation is needed when planting and during the early stages of growth. Cultivation to reduce plant competition commonly is necessary, particularly while the plantings are young.

Among the trees that are suitable for planting are ponderosa pine, Russian-olive, Colorado blue spruce, and eastern redcedar. Among the shrubs are caragana, lilac, honeysuckle, and sumac.

Wildlife such as cottontail, squirrel, mule deer, coyote, meadowlark, and mourning dove use this unit. They obtain their food and shelter from the natural vegetation of the area or from areas of cropland. Nearby areas of pinyon and juniper also provide shelter and nesting areas. Suitable management for wildlife should include protecting the unit from overgrazing and wildfire and maintaining adequate plant cover.

Low soil strength and high shrink-swell potential are the main limitations for the construction of homesite and urban development. The foundations of buildings should be designed to compensate for the high shrink-swell potential of the soil. Roads should be designed to overcome the limitations of low soil strength and high shrink-swell potential. The moderately slow permeability of the soil should be considered when designing septic tank absorption fields. Absorption fields may need to be made larger than normal. Sewage lagoons work well.

This map unit is in capability subclasses IIIe, irrigated, and IVc, nonirrigated.

63—Sili clay loam, 3 to 6 percent slopes. This deep, well drained soil is on upland valley bottoms and fans. It formed in moderately fine textured alluvium derived from shale. Elevation is 6,000 to 7,200 feet. The average annual precipitation is 12 to 18 inches. The average annual air temperature is 47 to 50 degrees F, and the average frost-free period is 110 to 130 days.

Typically, the surface layer is light brownish gray clay loam about 7 inches thick. The subsoil is light brownish gray clay loam about 15 inches thick. The substratum is light brownish gray clay loam that extends to a depth of 60 inches or more. In some of the more steeply sloping areas, these horizons are thinner.

Included in this unit are about 15 percent Arboles silty clay loam and small areas of Bodot clay and Mikim loam.

Permeability of this Sili soil is moderately slow. Effective rooting depth is 60 inches or more. Available water capacity is high. Runoff is medium, and the hazard of erosion is moderate.

This unit is used mainly for irrigated cultivated crops and pasture, nonirrigated crops, and rangeland. Barley,

oats, and alfalfa are the main irrigated crops. Wheat is the main nonirrigated crop.

In irrigated areas, the main concerns of management are controlling water erosion, maintaining the organic matter content and fertility of the surface layer, and properly using irrigation water. Returning crop residue to the soil increases the water intake rate, improves tilth, reduces erosion, and helps to maintain the organic matter content and fertility of the soil. The use of fertilizer helps to maintain the productivity and fertility of the soil. Grain and grasses respond to nitrogen, and legumes respond to phosphorus. Irrigation structures may be needed for the more uniform distribution of irrigation water. Irrigation methods suited to this unit are furrow, corrugation, and sprinkler systems. Furrow irrigation is suited to row crops. Sprinkler irrigation is well suited to most crops. Corrugation irrigation is suited to small grain, alfalfa, and pasture. Regardless of the irrigation method used, water should be applied carefully to minimize runoff and erosion.

In nonirrigated cropland areas, management is needed to control erosion, to conserve moisture, and to maintain the fertility of the soil. Using stubble mulch tillage and returning crop residue to the soil reduce runoff and erosion and conserve moisture. Chiseling or subsoiling can be used to break up the tillage pan and thus improve the water intake rate. Tillage should be kept to a minimum.

The native vegetation on this unit is mainly Indian ricegrass, junegrass, western wheatgrass, big sagebrush, pinyon, and Rocky Mountain juniper. Proper grazing use as part of a planned grazing system helps to maintain the quality and quantity of the preferred rangeland vegetation. Seeding and deferring grazing facilitate revegetation of areas depleted by heavy grazing, cultivation, and other disturbances. Mechanical or chemical brush control followed by seeding to adapted grasses improves areas under dense stands of sagebrush. Developing livestock watering facilities, fencing, and deferring grazing improve the distribution of grazing and help to maintain the condition of the rangeland. Contour furrowing and pitting increase the water intake rate and reduce runoff. These practices are especially effective in rangeland areas that are in poor to fair condition.

This unit generally is suited to windbreaks and environmental plantings. It is limited mainly by a lack of sufficient rainfall in summer. Supplemental irrigation is needed when planting and during the early stages of growth. Cultivation to reduce plant competition commonly is necessary, particularly while the plantings are young.

Among the trees that are suitable for planting are ponderosa pine, Russian-olive, Colorado blue spruce, and eastern redcedar. Among the shrubs are caragana, lilac, honeysuckle, and sumac.

Wildlife such as cottontail, squirrel, mule deer, coyote, meadowlark, and mourning dove use this unit. They obtain their food and shelter from the native vegetation. Nearby areas of pinyon and juniper also provide shelter and nesting areas. Suitable management for wildlife should include protecting the unit from overgrazing and wildfire and maintaining adequate plant cover.

Low soil strength and high shrink-swell potential are the main limitations for homesite and urban development. The foundations of buildings should be designed to compensate for the high shrink-swell potential of the soil. Roads should be designed to overcome the limitations of low soil strength and high shrink-swell potential. The moderately slow permeability of the soil should be considered when designing septic tank absorption fields. Absorption fields may need to be made larger than normal. Sewage lagoons work well if the limitation of slope is overcome.

This map unit is in capability subclasses IIIe, irrigated, and IVe, nonirrigated.

64—Simpatico loam. This deep, well drained soil is in drainageways on mesa tops. It formed in alluvium derived from nearby loess deposits. Slope is 1 to 3 percent. Elevation is 6,600 to 7,200 feet. The average annual precipitation is 15 to 18 inches. The average annual air temperature is 45 to 50 degrees F, and the average frost-free period is 100 to 125 days.

Typically, the upper part of the surface layer is grayish brown loam about 6 inches thick and the lower part is grayish brown silt loam about 6 inches thick. The upper part of the subsoil is brown silty clay loam about 22 inches thick, and the lower part is reddish brown silty clay loam about 11 inches thick. The substratum is light brown very cobbly loam that extends to a depth of 60 inches or more.

Included in this unit in areas east of the Animas River are about 15 percent Falfa clay loam and about 15 percent soils that are underlain by gravel and cobbles at a depth of 40 inches. Also included in areas west of the Animas River are small areas of Witt loam and Vosburg fine sandy loam.

Permeability of this Simpatico soil is moderately slow. Effective rooting depth is 60 inches or more. Available water capacity is high. Runoff is slow, and the hazard of erosion is slight. The soil is subject to flooding during periods of heavy rainfall and snowmelt.

The unit is used mainly for irrigated and nonirrigated crops and as rangeland. The main irrigated crops are barley, oats, pasture, and alfalfa hay. The main nonirrigated crops are pinto beans and wheat.

In irrigated areas, the main concerns of management are controlling erosion, maintaining the organic matter content and fertility of the soil, and properly using irrigation water. Incorporating crop residue into the surface layer increases the water intake rate, improves tilth, reduces erosion, and helps to maintain the organic