September 2015

IRRIGATION SYSTEM, SPRINKLER

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 442

IRRIGATION SYSTEM, SPRINKLER

An irrigation system is a system in which all necessary equipment and facilities are installed for efficiently applying water by means of nozzles operated under pressure.

PRACTICE INFORMATION

Sprinkler irrigation systems are used to achieve one or more of the following purposes:

- Efficient and uniform application of irrigation water to maintain adequate soil water for plant growth and production without causing excessive water loss, erosion, or water quality impairment
- Control of and/or modification of climate
- Application of chemicals, nutrients, and/or wastewater
- Reduction of particulate matter emissions to improve air quality

Common sprinkler systems on agricultural lands include fixed solid-set, big gun, periodic move and traveling sprinkler systems. Application rate and depth of application are based on the specific soils and crops. Runoff, translocation, and deep percolation are minimized. Distribution patterns, spacing, and operating pressure control the application rate. Systems used for chemigation or fertigation must meet industry-accepted wash-off and total rinse-out times.

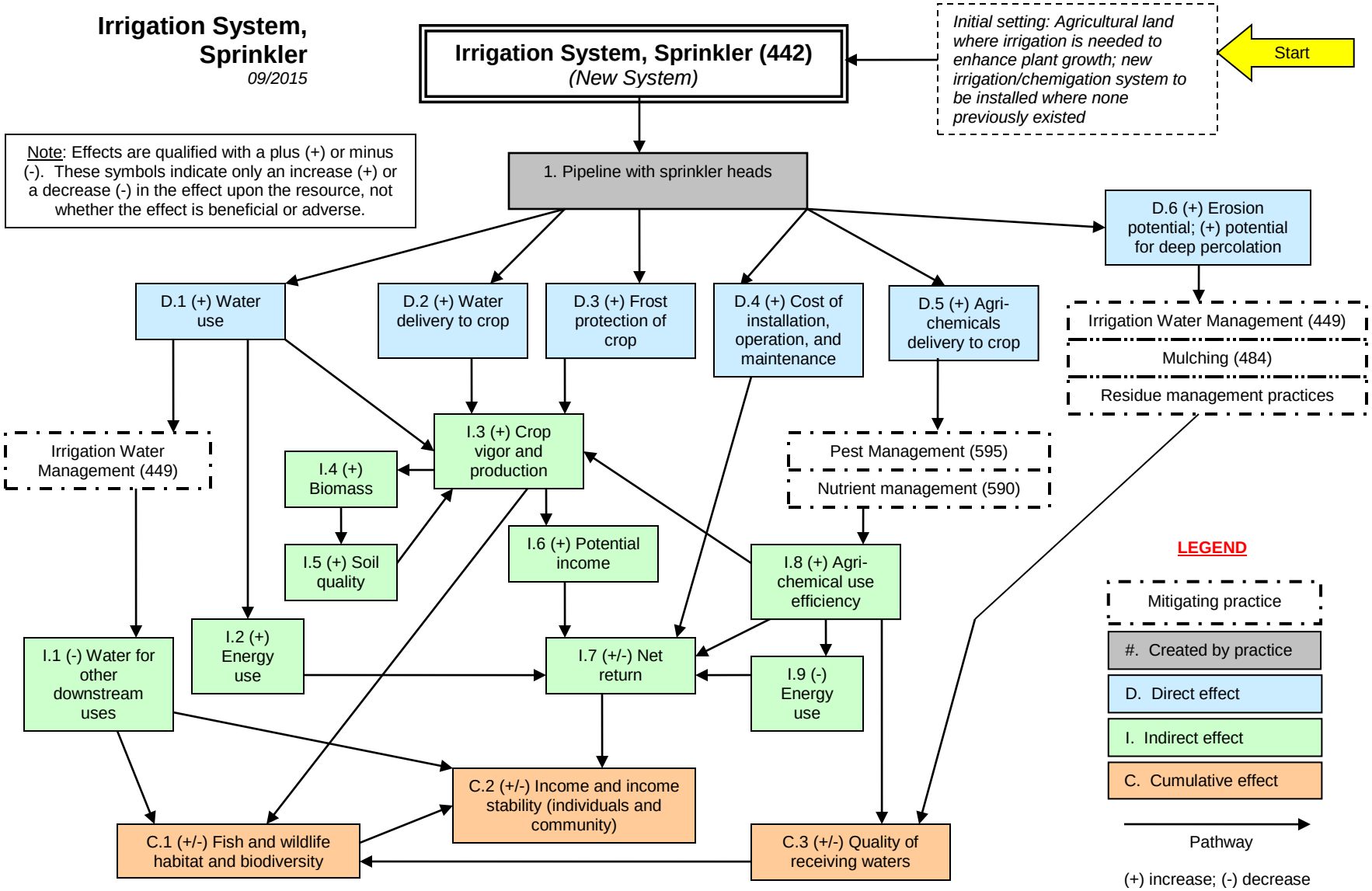
COMMON ASSOCIATED PRACTICES

Irrigation System, Sprinkler is commonly used in a Conservation Management System with practices such as:

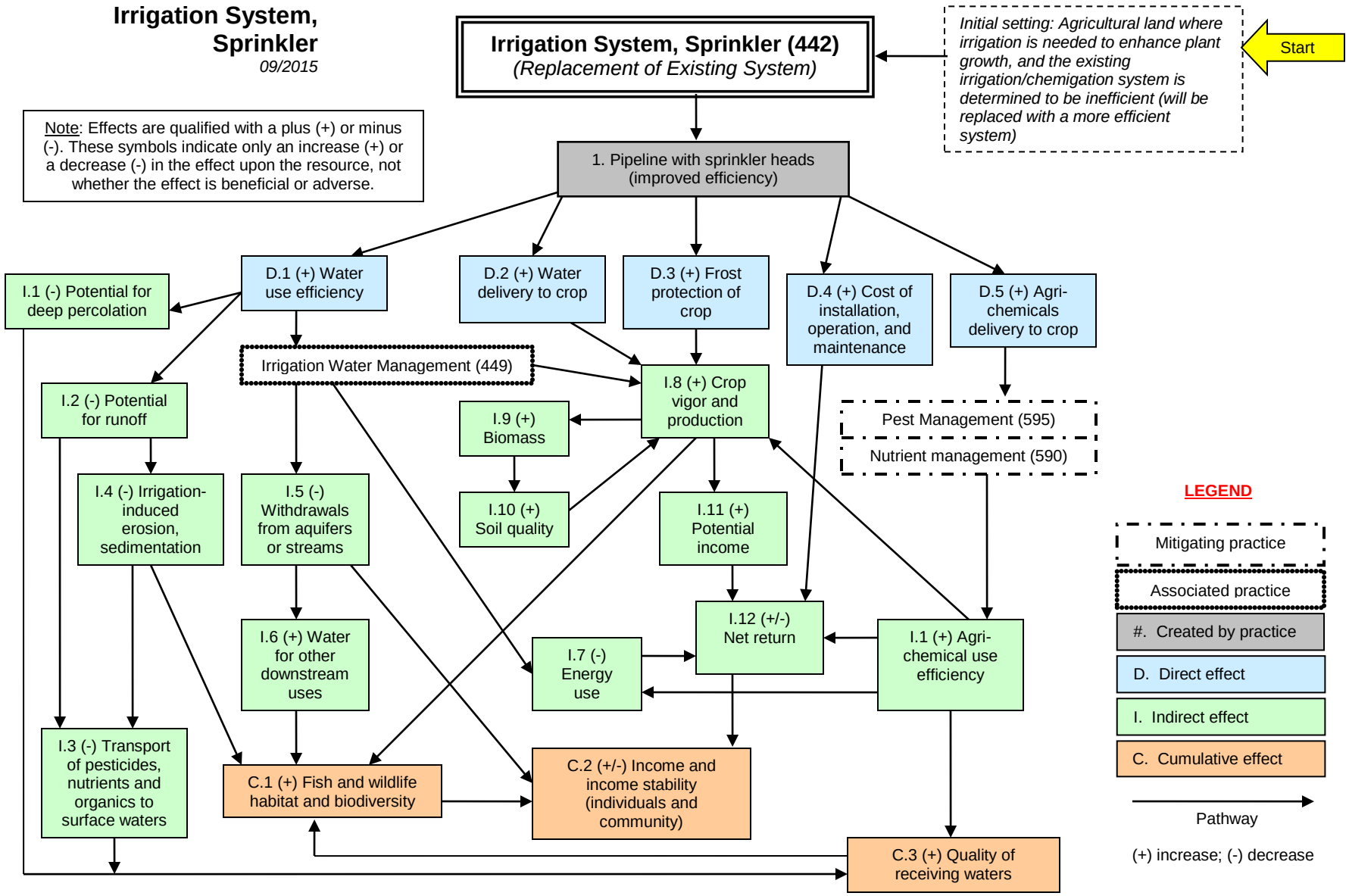
- Water Well (642)
- Pumping Plant (533)
- Irrigation Water Conveyance (428 series)
- Irrigation Water Management (449)

For further information, refer to the practice standard in the local Field Office Technical Guide and associated practice specifications and job sheets.

The following pages identify the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



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