

# Ground Water Contamination Can Occur If:

- Irrigation water containing chemicals flows back into the well
- The chemical injection pump continues to run after shut down of the well pump
- Chemicals overflow or spill from the chemical supply tank onto surrounding soil

## Prevention is the Key to Protection

Prior to injecting any pesticide, **read the label** to check if it can be applied through an irrigation system and then check for required backflow prevention components. The diagram illustrates the components (A-H) that prevent backflow of a pesticide into a private well. Please contact your Agricultural Commissioner or see the web site at <http://www.cdpr.ca.gov/docs/gwp/chem.htm> for additional requirements or designs that comply.

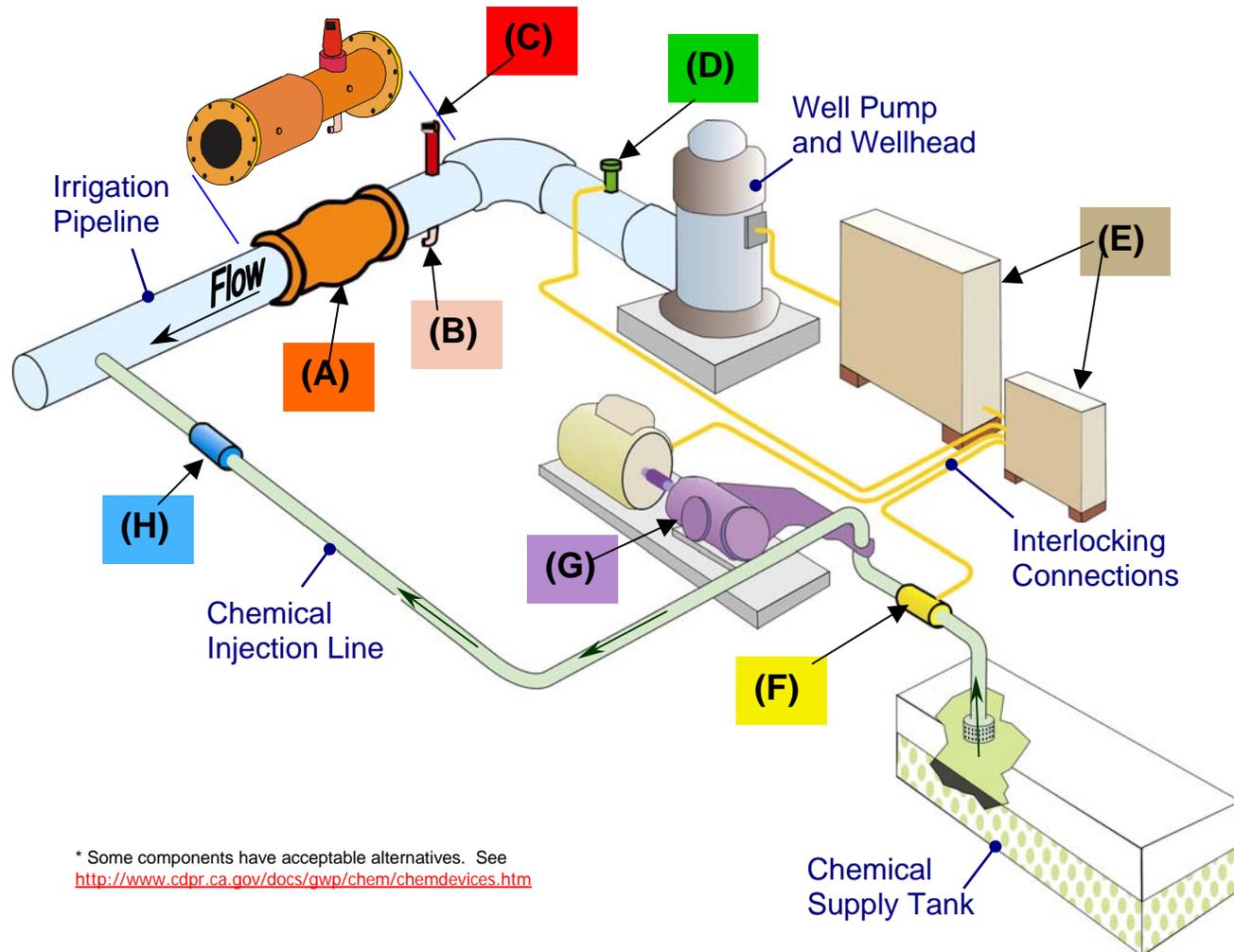
### Remember:

Read all chemigation instructions on the label before injecting the chemical

Identify all components of your system and make sure they are functioning properly

Monitor your system during chemigation

## Required\* Chemigation Components



\* Some components have acceptable alternatives. See <http://www.cdpr.ca.gov/docs/gwp/chem/chemdevices.htm>

(A) Mainline Single Check Valve\*

(B) Low Pressure Drain

(C) Air/Vacuum Relief Valve

(D) Pressure Switch

(E) Interlocking System Controls

(F) Solenoid Operated Valve\*

(G) Chemical Injection Pump\*

(H) Injection Line Check Valve\*

See reverse for component descriptions



## COMPONENT DESCRIPTIONS



# Protect Your Ground Water When You Chemigate

### (A) Mainline Check Valve:

- Prevents backflow to well
- Spring-loaded, positive closing action
- Watertight seal (not metal to metal)
- Install between well & chemical injection line

### (B) Low Pressure Drain:

- Drains minor check valve leakage away from well
- Install on bottom side of irrigation pipeline, upstream of mainline check valve

### (C) Air/Vacuum Relief Valve:

- Prevents backsiphonage
- Can be combined with inspection port
- Install upstream of mainline check valve

### (D) Pressure Switch:

- Stops chemical injection when water pressure decreases
- Install on irrigation pipeline or well pump

### (E) Interlocking System Controls:

- Automatically shuts off chemical injection pump when well pump stops
- Solenoid valve & chemical injection pump interlocked with pressure switch on the irrigation line
- Install between chemical injection pump & well pump

### (F) Solenoid Operated Valve:

- Prevents chemical withdrawal when irrigation system shuts down
- Install on intake side of chemical injection pump & connect to interlocking system controls

### (G) Chemical Injection Pump:

- Assures proper chemical injection rate
- Constructed of chemically resistant materials
- Connect to interlocking system controls

### (H) Injection Line Check Valve:

- Prevents flow of fluid back towards chemical injection pump
- Automatic, quick-closing check valve
- Constructed of chemically resistant materials
- Install between irrigation pipeline & chemical injection pump

If your irrigation system is connected to a municipal water system, contact your local health department or water purveyor to assure compliance.

Alternatives to these devices do exist. Check with your Agricultural Commissioner or see [www.cdpr.ca.gov/docs/gwp/chem.htm](http://www.cdpr.ca.gov/docs/gwp/chem.htm) for additional components or designs that fulfill backflow prevention compliance.

EH01-02

#### Contact Information:

Joy Lyn Dias  
California Department of Pesticide Regulation  
California Environmental Protection Agency  
1001 I Street; PO Box 4015  
Sacramento, CA 95812-4015  
Telephone (916) 324-4100; Fax (916) 324-4088

Project funded by U.S. EPA

Do you inject pesticides into your irrigation system? If so, then the California Department of Pesticide Regulation would like to remind you that safety devices are required to prevent ground water contamination.