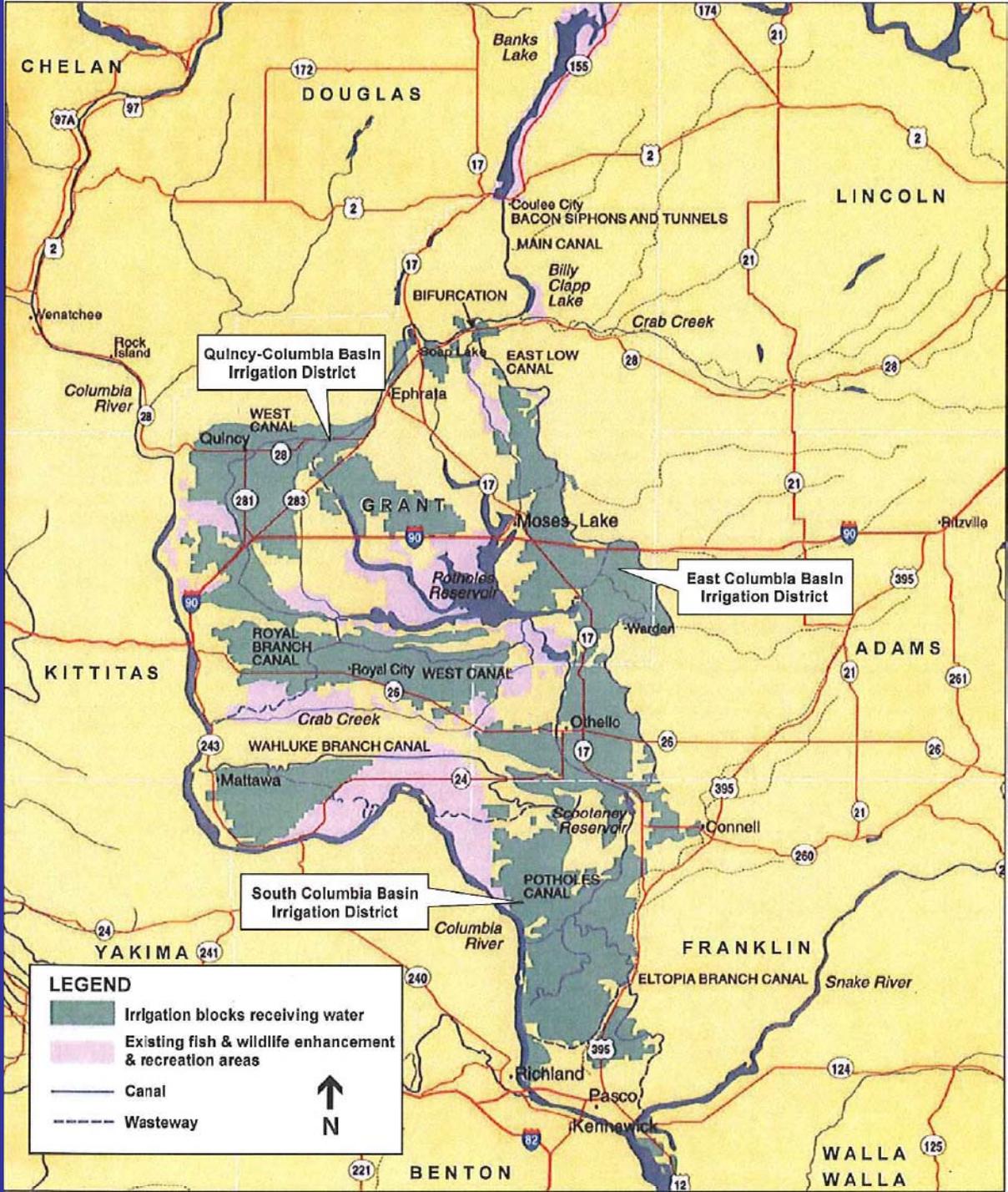
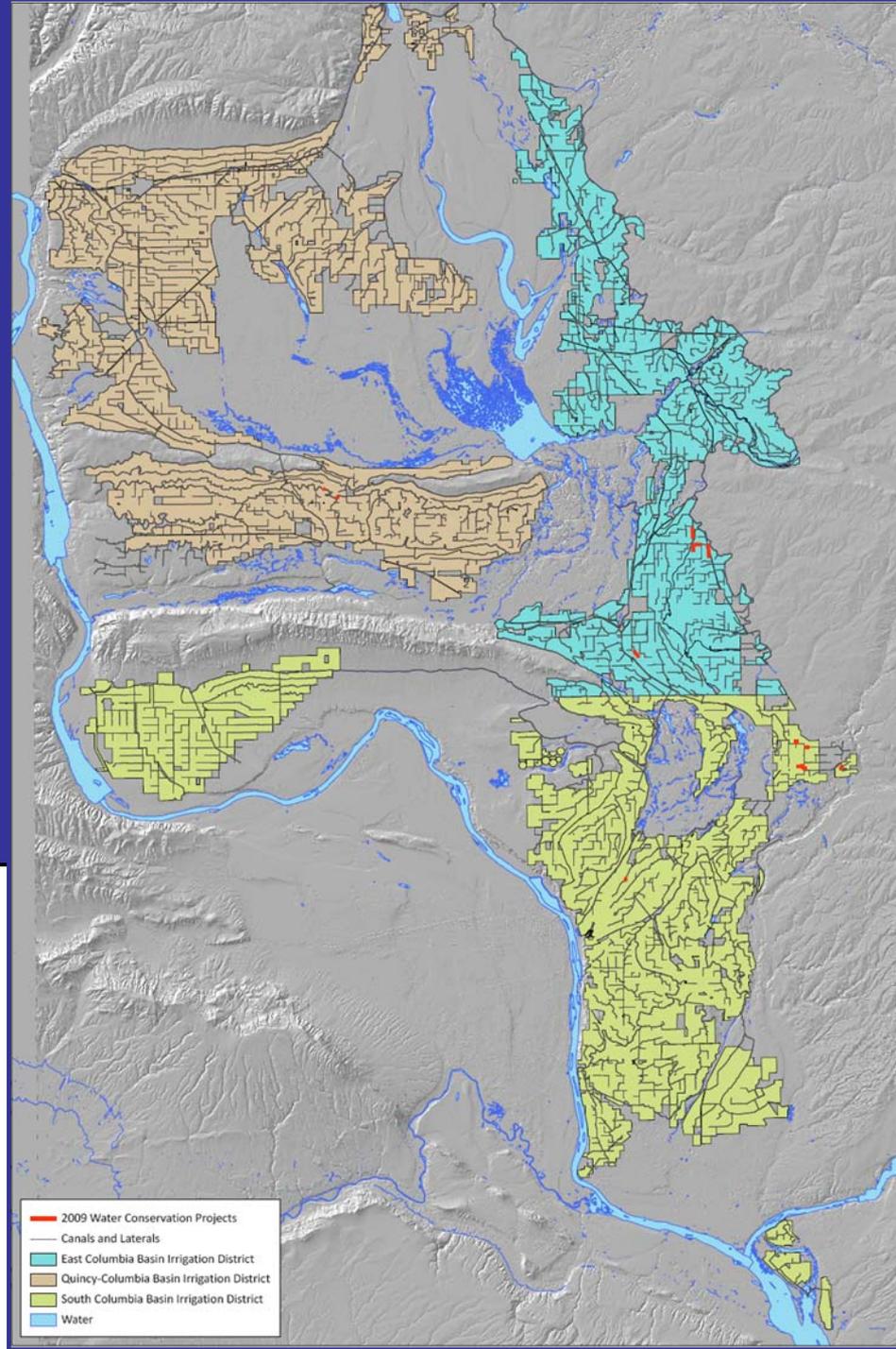


# Columbia Basin Project



# CBP Districts with Canals & Laterals

- 2009 Water Conservation Projects
- Canals and Laterals
- East Columbia Basin Irrigation District
- Quincy-Columbia Basin Irrigation District
- South Columbia Basin Irrigation District
- Water



# Geology Map

 2009 Water Conservation Projects

 Canals and Laterals

 Water

## GEOLOGY

 Mc - Continental sedimentary deposits or rocks

 Mcg - Continental sedimentary deposits or rocks, conglomerate

 Mv - Basalt flows

 PLMaf - Alluvial fan deposits

 PLMc - Continental sedimentary deposits or rocks

 PLMcg - Continental sedimentary deposits or rocks, conglomerate

 QPLcg - Continental sedimentary deposits or rocks, conglomerate

 Qa - Alluvium

 Qaf - Alluvial fan deposits

 Qd - Dune sand

 Qda - Dune sand, active dunes

 Qds - Dune sand, stabilized dunes

 Qfg - Outburst flood deposits, gravel

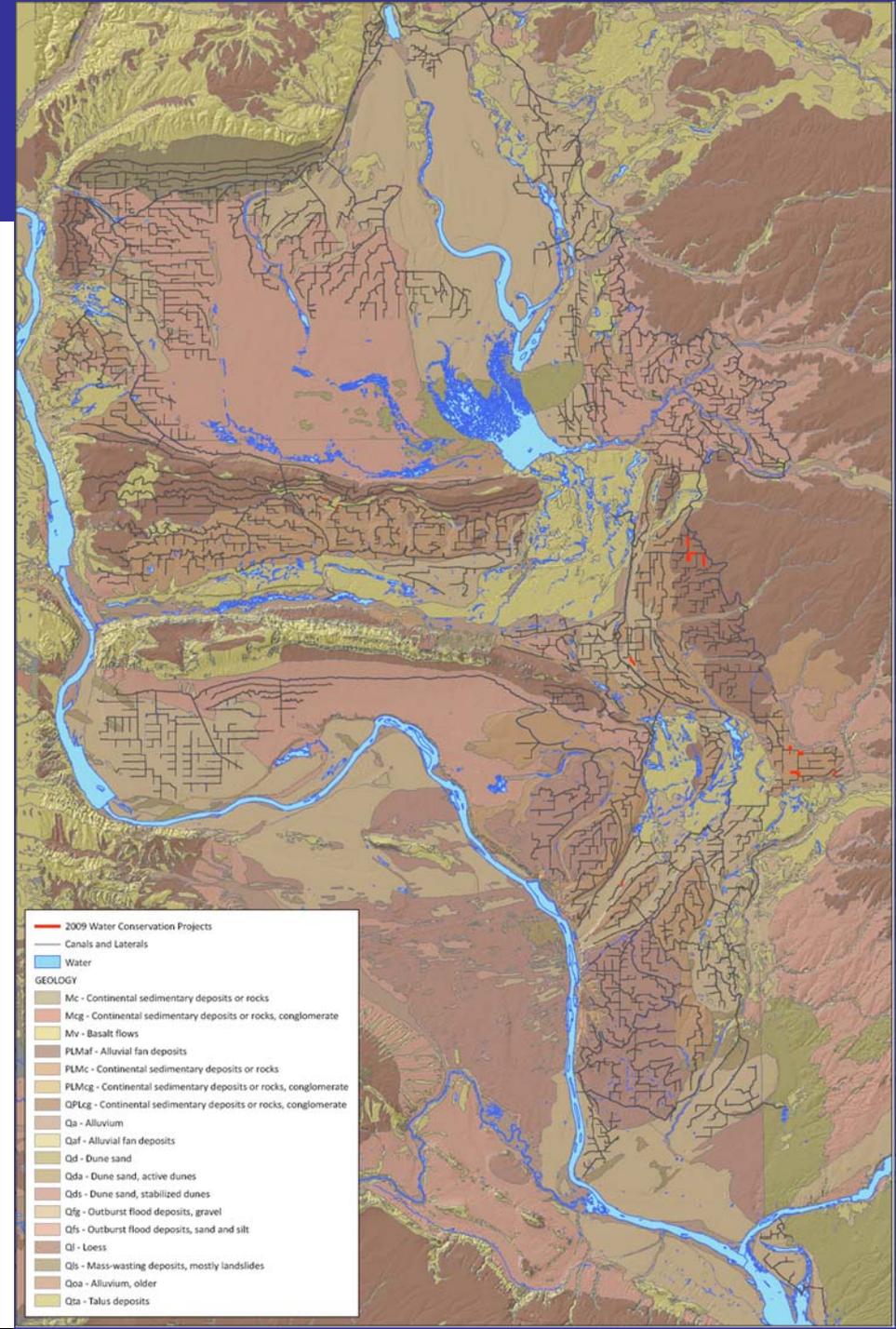
 Qfs - Outburst flood deposits, sand and silt

 Ql - Loess

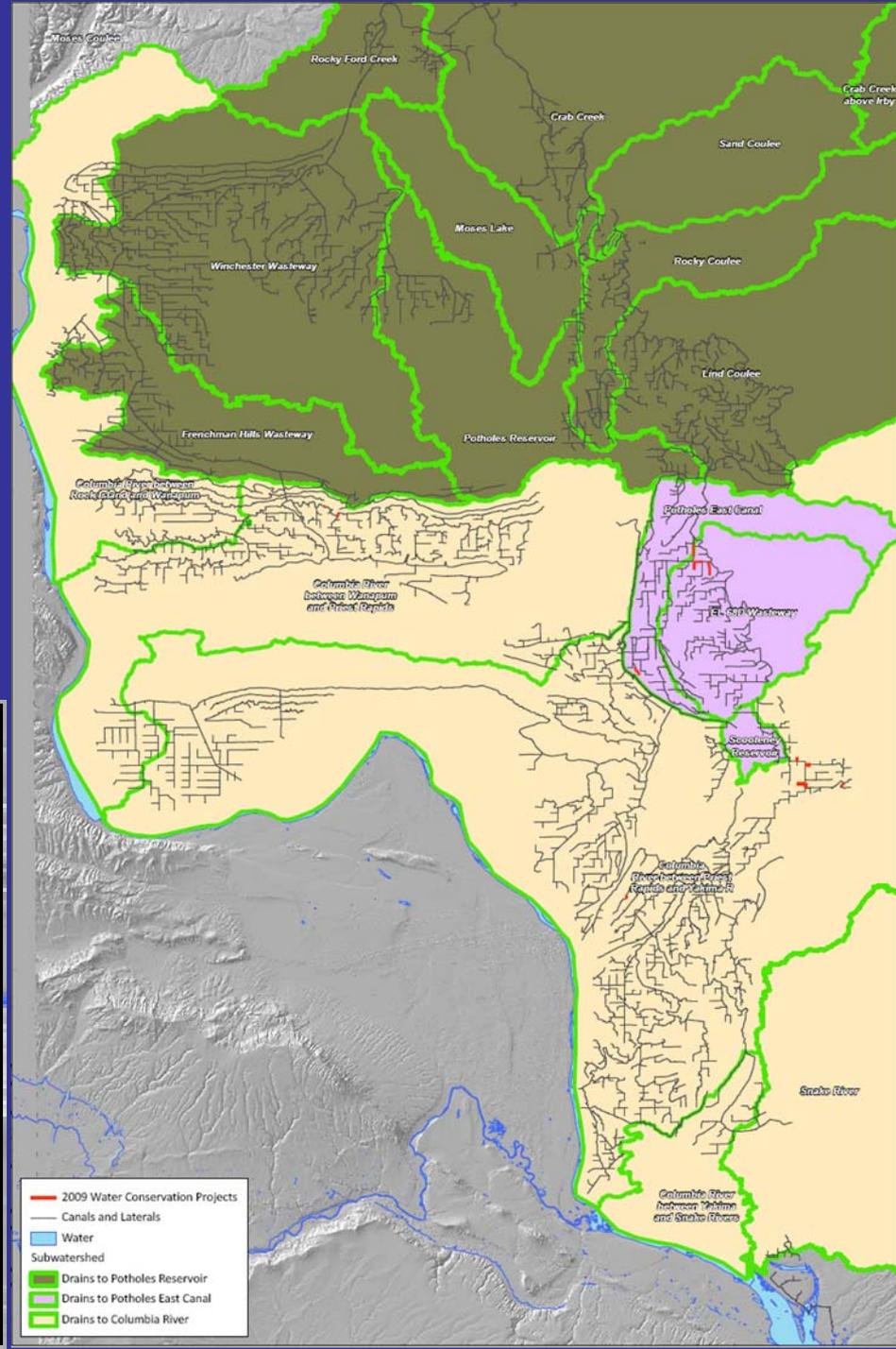
 Qls - Mass-wasting deposits, mostly landslides

 Qoa - Alluvium, older

 Qta - Talus deposits



# Project Drainage Locations



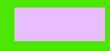
 2009 Water Conservation Projects

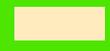
 Canals and Laterals

 Water

 Subwatershed

 Drains to Potholes Reservoir

 Drains to Potholes East Canal

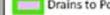
 Drains to Columbia River

 2009 Water Conservation Projects

 Canals and Laterals

 Water

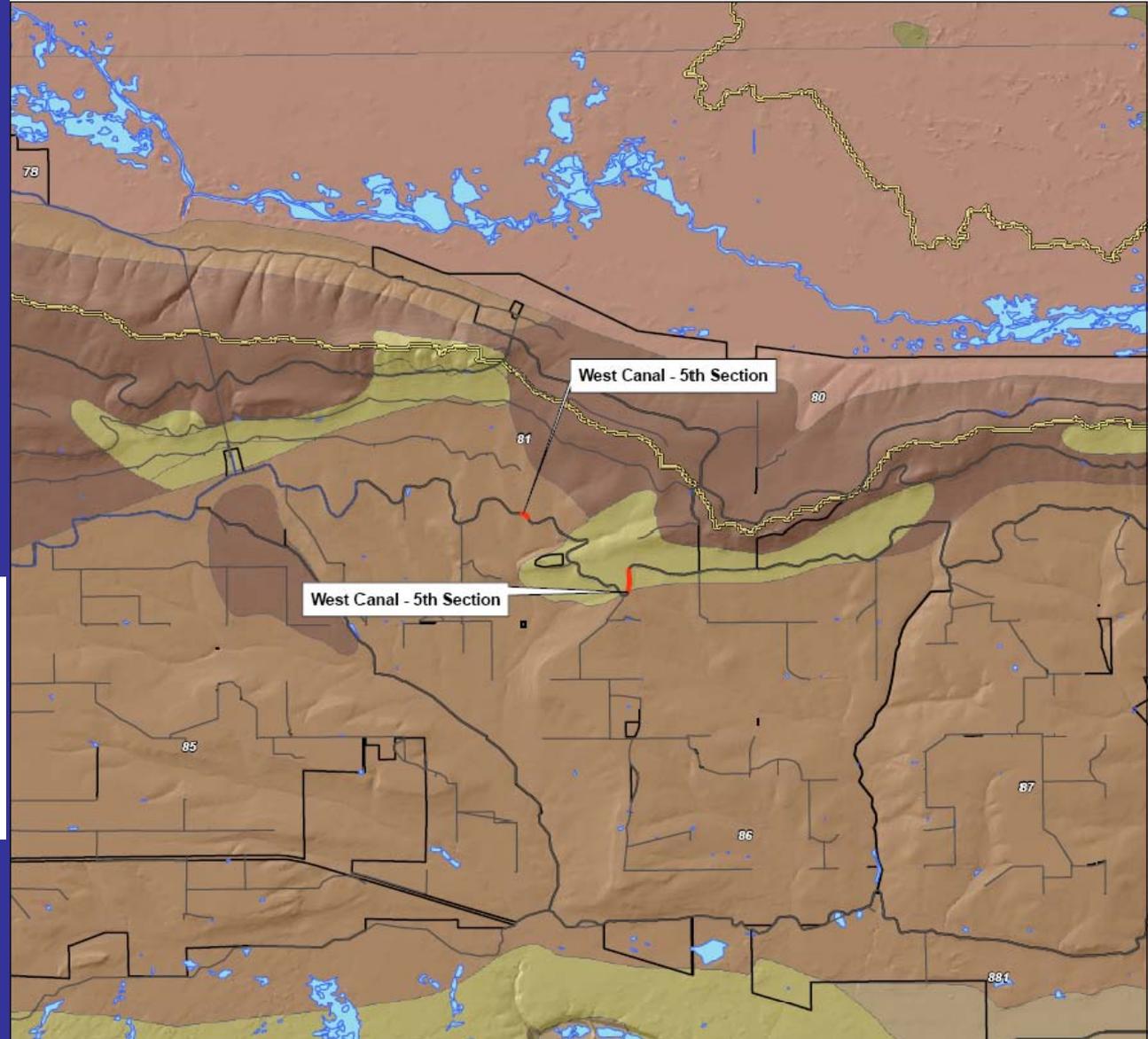
 Subwatershed

 Drains to Potholes Reservoir

 Drains to Potholes East Canal

 Drains to Columbia River

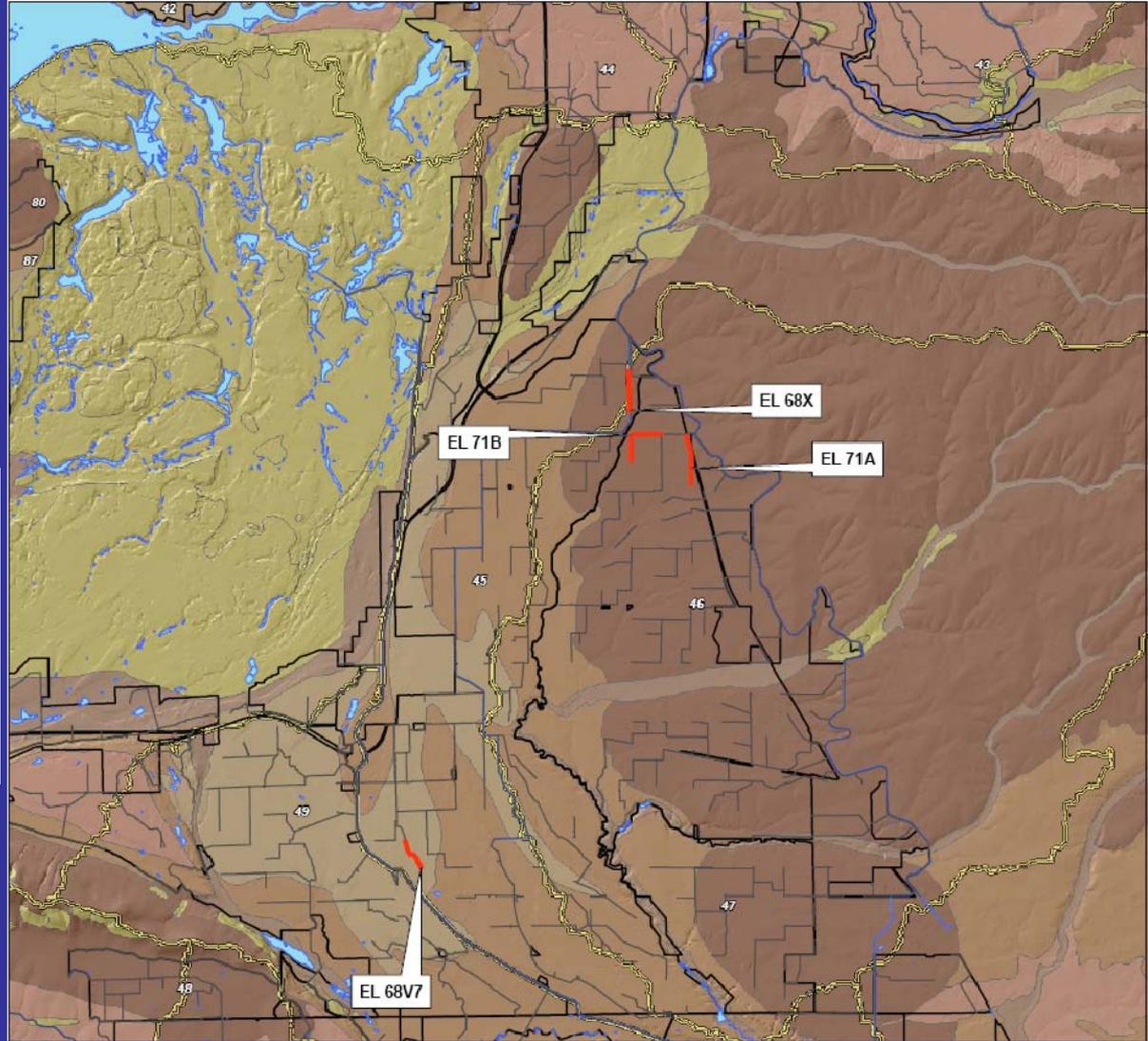
# Quincy District Projects



- 2009 Water Conservation Projects
- Canals and Laterals
- Blocks
- Subwatershed
- Water

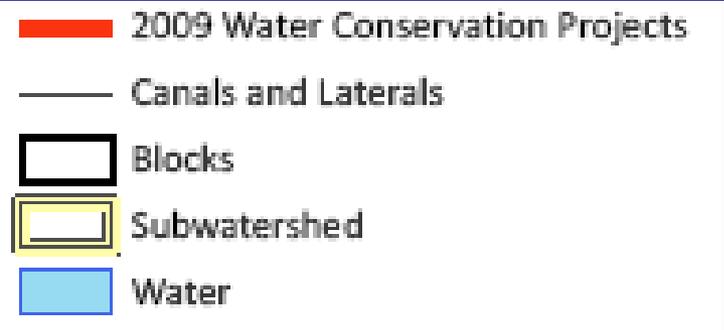
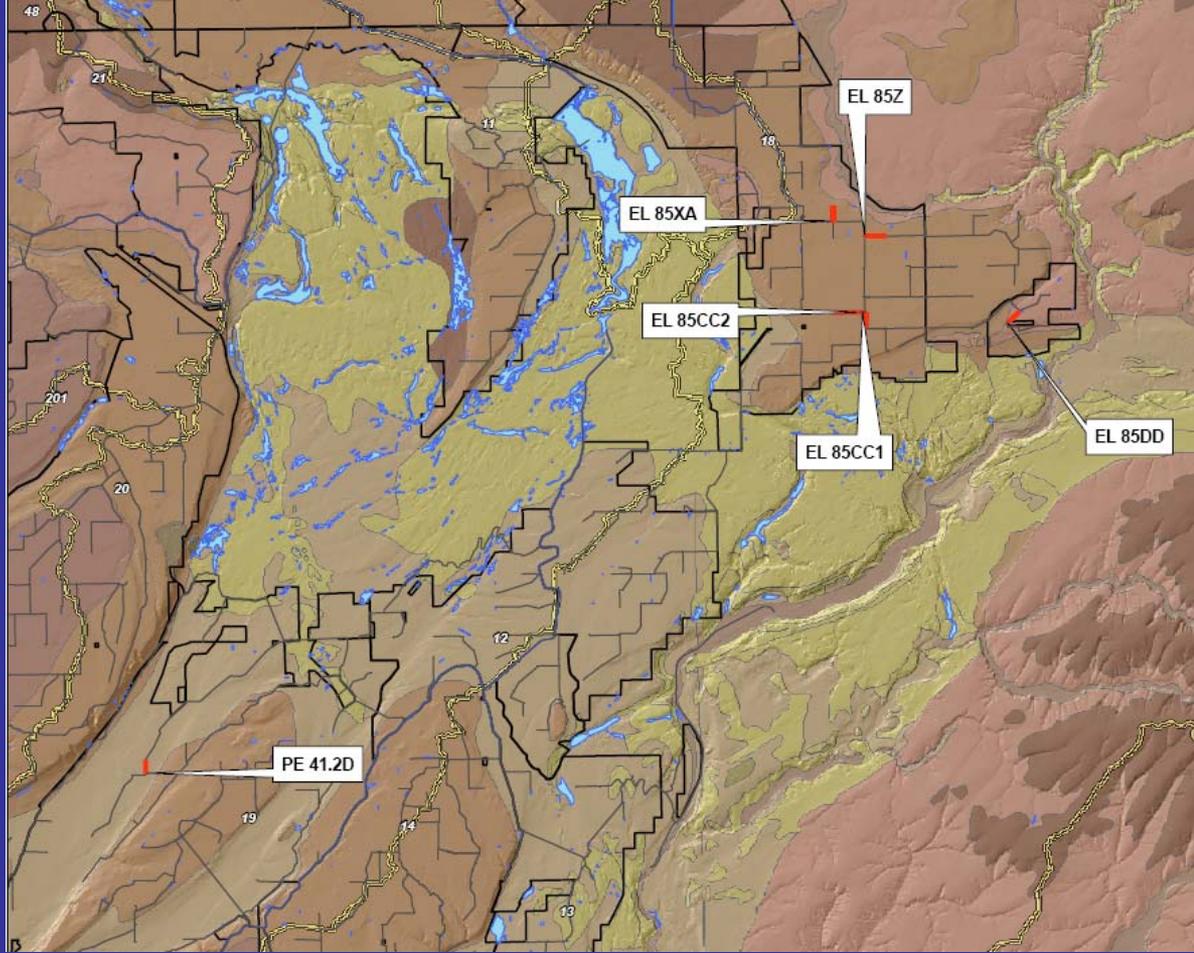
| District | Block | Location                 | Length (ft) | Design Flow (cfs) | Pipe Size | Geology | Estimated Cost | Seepage Rate (ft/day) | Assumed Savings (AF/yr) | Cost per AF Savings |
|----------|-------|--------------------------|-------------|-------------------|-----------|---------|----------------|-----------------------|-------------------------|---------------------|
| QCBID    | 86    | West Canal - 5th Section | 500         | 555               | Line      | PLMc    | \$ 90,125      | 0.73                  | 57.2                    | \$ 1,576            |
| QCBID    | 86    | West Canal - 5th Section | 1,000       | 450               | Line      | Mv      | \$ 164,150     | 0.99                  | 153.8                   | \$ 1,067            |

# East District Projects



| District | Block | Location | Length (ft) | Design Flow (cfs) | Pipe Size | Geology | Estimated Cost | Seepage Rate (ft/day) | Assumed Savings (AF/yr) | Cost per AF Savings |
|----------|-------|----------|-------------|-------------------|-----------|---------|----------------|-----------------------|-------------------------|---------------------|
| ECBID    | 45    | EL 68X   | 3,900       | 10                | 18"       | QI      | \$ 120,900     | 2.24                  | 220.1                   | \$ 549              |
| ECBID    | 45    | EL 68V7  | 3,160       | 4.1               | 18"       | Qfg     | \$ 97,960      | 2                     | 147.8                   | \$ 663              |
| ECBID    | 46    | EL 71A   | 3,180       | 7                 | 18"       | QI      | \$ 98,580      | 2.24                  | 179.5                   | \$ 549              |
| ECBID    | 46    | EL 71B   | 2,650       | 9                 | 15"       | QI      | \$ 60,950      | 2.24                  | 171.0                   | \$ 356              |

# South District Projects



| District | Block | Location | Length (ft) | Design Flow (cfs) | Pipe Size | Geology | Estimated Cost | Seepage Rate (ft/day) | Assumed Savings (AF/yr) | Cost per AF Savings |
|----------|-------|----------|-------------|-------------------|-----------|---------|----------------|-----------------------|-------------------------|---------------------|
| SCBID    | 18    | EL 85CC1 | 1,050       | 4.5               | 18"       | PLMc    | \$ 32,550      | 0.73                  | 20.7                    | \$ 1,573            |
| SCBID    | 18    | EL 85CC1 | 1,500       | 7                 | 24"       | PLMc    | \$ 72,000      | 0.73                  | 38.4                    | \$ 1,874            |
| SCBID    | 18    | EL 85CC2 | 1,220       | 11                | 27"       | PLMc    | \$ 70,760      | 0.73                  | 34.5                    | \$ 2,053            |
| SCBID    | 18    | EL 85DD  | 1,650       | 10                | 24"       | Qfs     | \$ 79,200      | 1.5                   | 111.3                   | \$ 712              |
| SCBID    | 18    | EL 85Z   | 1,770       | 6                 | 27"       | PLMc    | \$ 102,660     | 0.73                  | 52.3                    | \$ 1,962            |
| SCBID    | 19    | PE 41.2D | 1,380       | 7                 | 15"       | Qfg     | \$ 31,740      | 2                     | 79.5                    | \$ 399              |
| SCBID    | 18    | EL 85XA  | 790         | 8                 | 24"       | PLMc    | \$ 37,920      | 0.73                  | 20.2                    | \$ 1,874            |

# 2009 Projects

- 22,250 feet of pipe to replace open canal
- 1,500 feet of canal lining
- Estimated cost: \$1.06 million
- Estimated water savings: 1,286 AF/yr
  - Quincy District: 211 AF/yr (Columbia River)
  - East District: 718 AF/yr (Potholes East Canal)
  - South District: 357 AF/yr (Columbia River)
- Cost per AF of water saved: \$824/AF/yr