

Landscape Plumbing: Mapping the Water of the Treasure Valley

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The man-made hydrology of the lower Boise River basin in southwest Idaho has a reputation for being extraordinarily complex. Once it has been withdrawn from rivers, irrigation water is distributed through a system of laterals, pipes, siphons and pumps. It is reused multiple times, and often falls under the control of several irrigation entities. Tracing its tortuous path is difficult, and although TMDLs often assign load allocations to man-made drains, the source of water in these drains is sometimes a mystery.

The irrigation system is a far more extensive and complicated system than the river itself, and deserves greater study. In general, each irrigation district has detailed maps of its own system, but a valley-wide map is elusive. Luckily, at its core, the plumbing is comprised of simple elements: farm fields that accept and shed water. The “blue-sky” goal of this project was to identify the source and destination of water for every field in the lower Boise River valley.

Methods included use of GIS, aerial photography, field visits, Google Streetview, topographic maps and proprietary irrigation district maps.

The resultant large map can be very helpful when assessing the opportunity for intelligent reuse of water. It can be used to identify pour points for large irrigated areas. Restoration projects can be ranked by their net contribution to surface water. The map can also provide a framework for discussion of valley-wide implementation efforts.

This presentation will introduce the map, and demonstrate the methods used in its creation.