

FISH AND AMPHIBIAN USE OF VEGETATED AND NON-VEGETATED INTERMITTENT CHANNELS IN THE UPPER WILLAMETTE BASIN

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Intermittent agricultural drainages found in the lowlands of the upper Willamette Basin provide habitat characteristics that may be preferred by native species of fish and amphibians. Vegetated substrates and lack of vegetation growing in the channels are the most common habitat differences amongst intermittent watercourses. Current grass-seed farming practices involve either seeding intermittent channels with a water-loving grass species or mechanically or chemically removing the vegetation. Neither practice has looked at possible implications for resident fish and amphibian populations. Past results indicate that vegetated substrates provide an order of magnitude more invertebrates than the adjacent hard pan clay substrates as well as provide cover for some fish species. We expect that the cover and increased food availability provided by vegetation

would increase the abundance and diversity of fish and amphibian assemblages using this seasonally available habitat. In the fall through spring 2005-2006, we sampled fish and amphibian communities and compared them between twelve seasonally dry channels draining tributaries of the Willamette River in western Oregon. Six channels were selected as vegetated or had a high proportion of rooted vegetation covering the substrate and the remaining six had very little or an absence of vegetation in the channel. Preliminary results showed a high variability in the abundance and diversity of fish and amphibians using the intermittent watercourses. A few non-vegetated channels had very high abundances of fish, but were dominated by only one species. In contrast, a few vegetated channels had relatively low numbers of fish but high species richness.