

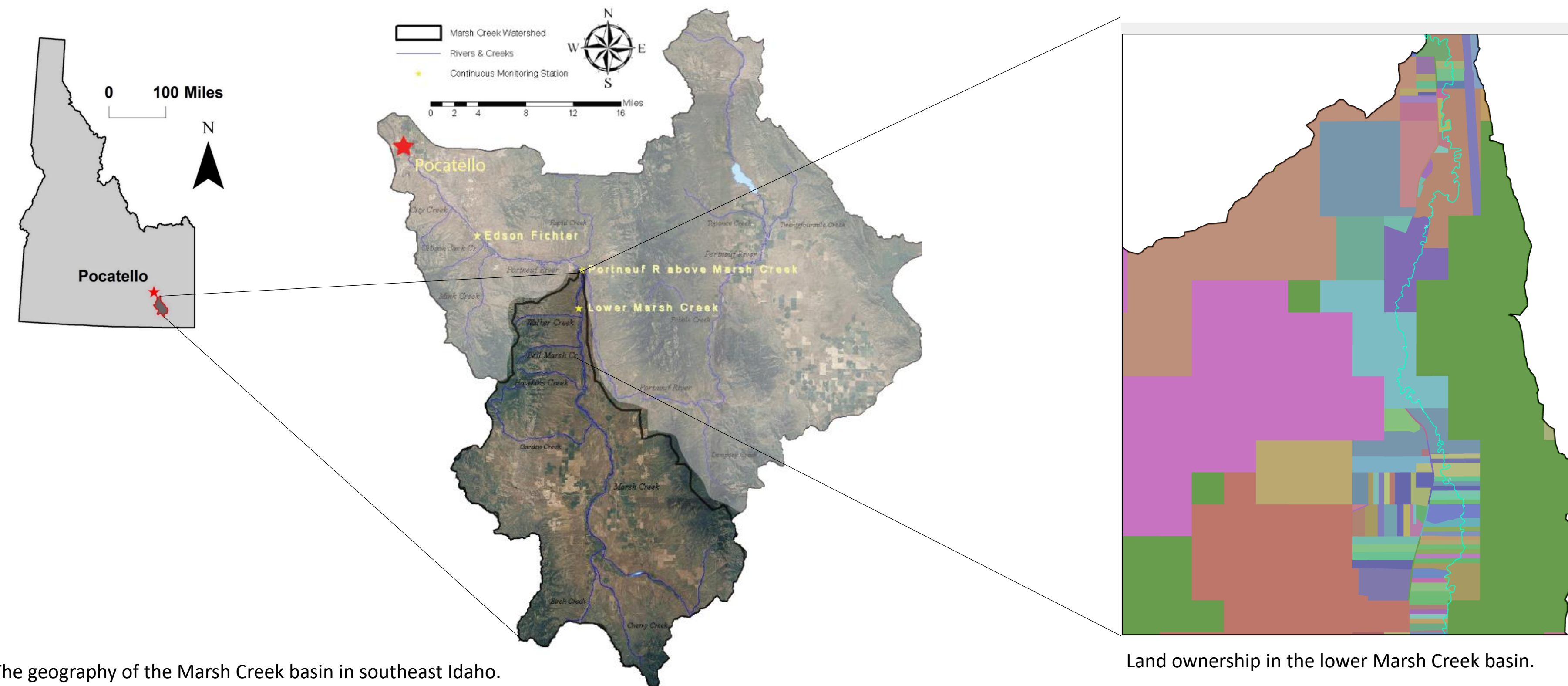
# Landowner Perspectives on Water Quality Management in Marsh Creek



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A stretch of Upper Marsh Creek near Downey, ID.



The geography of the Marsh Creek basin in southeast Idaho.

Land ownership in the lower Marsh Creek basin.



A ranch on lower Marsh Creek, with new stock pens and an off-stream watering system.

## Abstract

Watershed restoration efforts are a subject of increasing interest as many communities seek to address the impacts of past management and development on nearby lakes, streams, and rivers. To be truly successful, such restoration efforts must take a landscape perspective that encompasses the watershed as a whole. This makes restoration efforts necessarily complex, as residents, stakeholders, and businesses within the watershed hold a wide variety of values, interests, and goals with regard to how it should be managed.

Marsh Creek is the largest tributary of the Portneuf River, and the dominant source of several pollutants, including sediment, nutrients, and *E. coli* bacteria. For over thirty years, conservation programs have attempted to improve water quality in Marsh Creek, many depending on voluntary action by private landowners. On-going geophysical analysis at ISU suggests that conservation work in lower Marsh Creek may be particularly effective at further reducing sediment levels in the future. However, the lower basin of Marsh Creek is particularly noted for its highly fragmented land ownership patterns, creating a challenge for future conservation efforts.

Since success in improving water quality in Marsh Creek depends on the actions of private landowners, understanding how landowners view the programs promoted by state and federal agencies is critical. The goal here is to understand landowners' perceptions of water quality in Marsh Creek, familiarity with available programs, and preferences for future water quality management efforts.

## Data Collection

In the summer of 2016, semi-structured interviews were conducted with two known participants in conservation programs in Marsh Creek, and a stratified random sample of nine additional Marsh Creek landowners. Interviews were transcribed and analyzed for qualitative themes, which are presented here. These themes informed the development of a more extensive quantitative survey of the Marsh Creek community slated for October 2017.

## Findings

Interviewed landowners ranged from residential home-owners to large agricultural producers: 4 landowners with less than 10 acres, 3 landowners between 15-25 acres, 3 landowners over 200 acres.

When asked about agencies involved with water quality management, 5 of 12 interview participants recognized the Natural Resource Conservation Service (NRCS), 7 out of 12 recognized the Idaho Department of Environmental Quality (DEQ), and 5 out of 12 recognized the Portneuf Soil and Water Conservation District (SWCD). Among the landowners with less than 25 acres, the Conservation Reserve Program (CRP) was the only conservation program recognized, by four out of 7 of these participants.

Four interview participants had participated in formal conservation programs, including a conservation easement (1), CRP (1), and Section 319 water quality projects through the DEQ (2), while another three participants implemented conservation projects on their own.

## Themes

### 1) Marsh Creek water quality has declined over time, but is still a desirable property amenity.

- "My perception is [that it's] definitely not great, but it's not terrible. I feel safe getting in the water for a few minutes. I feel safe having my animals drink out of it."
- "There aren't [any] trout left, because the water just got so warm in the last four or five years. But the only thing in there now is suckers and carp. The water is just [too] warm!"
- I just love the solitude, the great people in the area, having the nice creek there. Even though we don't have water rights, it sure makes it greener down there.

### 2) While cattle grazing is frequently identified as a major source of Marsh Creek's water quality problems, landowners also pointed to changing irrigation practices, wildlife, and the creek's natural "marshiness."

- "You know, the term that I heard out there, from people who have lived there a long time, is the creek is 'cowed out.'"
- "Well, I think it's the level of water that's being used in irrigation, because they're using—when I was a kid, we had hand lines and a few wheel lines, but now they're using these big center pivots, and they're putting a whole lot of water out at one time, which is great, but it's drawing on the aquifers and the springs downstream, and it's pulling them down."
- "I think it's just the nature of the area."

### 3) Although this was a very wet year, most landowners have noted the existence of conflict over water among their neighbors in dryer periods.

- "Yes. Especially those people who are from Utah who haven't been from an earthy area or don't know—they think they're farmers, but they're really not. Oh, yes."
- "I guess the only bother I've got about some of the stuff that's happening in this valley is we've got some big-time farmers coming in, and I won't name names or say anything about it, but they're drilling some major wells and running some major pivots."
- "When it comes to water, people turn out, come out of the woodwork. They want their water, and they want all they can get."

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