

**SALMON AND STEELHEAD RUNS AND RELATED EVENTS
OF THE SANDY RIVER BASIN – A HISTORICAL PERSPECTIVE**

**Prepared for Portland General Electric
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[front cover photo: Aerial view of Sandy Basin near Marmot Dam. Mt. Hood in background
PGE Photo Library]

[back cover photo: "Construction at Big Sandy end of tunnel for Bull Run Project"
PGE Photo Library]

FOREWORD...

Over the past 30 years I have had a chance to hike, fish, snorkel, SCUBA, boat and, on many occasions, fly over most of the Sandy and Clackamas rivers. Once you begin to know an area well, some of the most intriguing conversations are with the people who came before you, the "old timers". Invariably these conversations end up on the subject of fish. The knowledge these people have often brings a new perspective to how we got to where we are today. We can only wonder what it was like before today's "old timers".

Salmon and trout populations are molded by the environments of the watersheds from which they come. To understand the fish populations of today, we must examine the historical record of activities in the watershed. Now, as the concern for the future of salmon and trout populations become more critical, thousands of new people are moving into the area. Their historical perspective of these rivers may be only the past few years. As PGE prepares to relicense its hydroelectric projects on the Sandy and Clackamas rivers, there is an opportunity to compile the historical record related to fish. This should help us all have a common understanding of how the fish populations in these two rivers have evolved to where they are today.

I did not know Barbara before this project, and she did not know the Sandy or Clackamas rivers, which is probably good as she started with no preconceived notions. It has been exciting to see the new information she has found. This was a difficult job as she had to be part detective; the information from the last 100+ years is scattered in various libraries, museums, file cabinets and memories. Sometimes she was frustrated, knowing there had to be more hard information out there, but was unable to find it. Thank you, Barbara, for a job well done.

One thing that we humans seem to do well is manipulate and modify our environment to suit our current needs. Hopefully, as we review our history we can identify pathways for the future that provide for the fish as well as for us.

*—Doug Cramer
PGE Biologist*

INTRODUCTION

This report provides historical information on the Sandy River, focusing primarily on its salmon and steelhead runs. Portland General Electric has developed this information as part of the relicensing effort for its Bull Run hydroelectric project regulated by the Federal Energy Regulatory Commission.

The report looks at events and developments that have shaped conditions in the Sandy River watershed over the years and influenced the basin's salmon and steelhead runs. It gives an overview of physical conditions in the basin, including hydrology characteristics, geography, water quality and other features that have supported healthy fish runs for centuries, and describes human settlement and development within and outside the watershed since the early 1800s. The discussion focuses on activities such as timber harvest, dam development, and fishing, and discusses how these activities affected salmon and steelhead habitat and production.

Further, the report examines changes in salmon and steelhead production from the early 1800s to present times. This discussion is separated into three distinct periods. The first period, which covers salmon and steelhead production before 1900, includes the beginning of commercial fisheries and extensive egg takes for hatchery operations in the basin. The second period, extending from 1900 to 1950, shows changes in fish production over years when hydroelectric operations, municipal water supply development, timber harvest and other activities altered habitat conditions and blocked fish migration to historical habitat areas. The third period, from 1950 to the present, discusses efforts to rebuild salmon and steelhead production in the upper basin and hardships caused by escalating activities in the area.

Information available for this analysis, particularly describing salmon and steelhead runs and human developments in the Sandy River Basin before the middle 1900s, was often sketchy and limited in its scope. The report attempts to link various accounts of events in the basin over the years. As a result, it relies heavily on early records by fish propagators, harvesters and historians to depict the size and health of the runs before fish counts became available. It presents only limited information on coho and steelhead runs as the early reports (and activities) generally focused on chinook salmon, the preferred fish at the time.