



How Has Restoration of the Stream Channel of Chester Creek Near Begich Middle School Changed the Water Quality Anchorage, AK.

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Introduction

On August 22, 2007 students will arrive to open the newest middle school in Anchorage, Nicholas Joseph Begich Middle School. The school is located near the intersection of DeBarr and Muldoon on the east side of Anchorage. One of the features of this area is the Middle Fork of Chester Creek. Chester Creek is an urban creek that forms in the Chugach Range and flows to Cook Inlet. Over the last 60+ years the creek has been heavily impacted by development. Since 2001 work has been done to restore the creek to its original channel near the school. I have looked at the changes in the channel and collected water chemistry data for stations above and below where the restoration took place. The data will be used as base line for looking at how the restoration may have changed the water chemistry.



Fig. 1 Chester Creek, Begich Middle School prior to restoration.

Materials and methods

For this project I used images of the area recorded prior to 2001 and after 2001. New shape files were created to show the changes in the channel of Chester Creek. The maps were created using ArcGIS v. 9.1. Information about the water chemistry was gathered from reports by Alaska Department of Fish and Game. Information about the restoration project came from the Municipality of Anchorage.

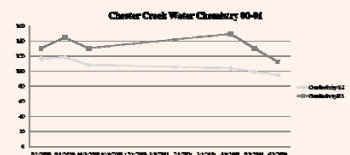
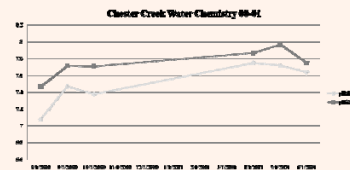
The maps show how the creek has changed from a channelized creek to one that shows more natural meanders and pools. The water quality data gives an idea about what was going on in the creek prior to the restoration with the goal of using the information to start studying the creek in depth.



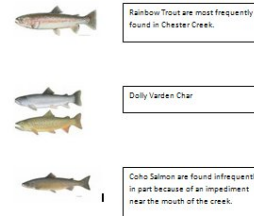
Fig. 2. Chester Creek after the restoration.

Results

Chester Creek Restoration
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Fish Found In Chester Creek



Changes to the NW Corner Muldoon and DeBarr

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Conclusions

There have clearly been changes in the channel of the Middle Fork of Chester Creek as shown in the maps that were produced. These changes have added meanders and pools that more closely resemble the original channel of the creek. Water chemistry studies done prior to the changes show differences in pH (slight) and conductivity (greater) between the upper station (Early View at Morning Song Park) and the lower station (Northern Lights and Boniface).

This leads to the question of whether the changes in the creek channel have resulted in changes in the water chemistry in the lower station (Northern Lights and Boniface). An additional question could be whether these changes have improved the fish habitat in Chester Creek.

Literature cited

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 Davis, J and Muhlbreg, G ; Alaska Department of Fish and Game; Technical Report No. 01-7, Chester Creek Stream Condition Evaluation, 2001.
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For further information

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