

EFFECTS OF URBANIZATION ON STORM RESPONSE
IN THE NORTH FORK SAN PEDRO CREEK

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Geography

by

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CERTIFICATION OF APPROVAL

I certify that I have read *Effects of Urbanization on Storm Response in the North Fork San Pedro Creek* by Paul Franklin Amato, and that in my opinion this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirements for the degree: Master of Arts in Geography at San Francisco State University

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EFFECTS OF URBANIZATION ON STORM RESPONSE
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This study reviews the record of land use change in the San Pedro Creek watershed, in Pacifica California, focusing on the effects of 50 years of urbanization. Storm related discharge and turbidity were measured and compared for the undeveloped Middle Fork and partly developed North Fork tributaries to quantify differences associated with impervious surfaces and increased drainage density from hillside residential development. Continuous recording data loggers in both tributaries measured rainfall, turbidity, and stage (used to estimate discharge) during three storm events. Rainfall values were consistently higher in the Middle Fork drainage but response time of discharge in the North Fork was faster and resulted in peaks of greater magnitude and frequency. Middle Fork turbidity was, on average, 10 times greater than the North Fork. Bank erosion, measured downstream of the Middle and North Fork confluence, was the greatest per linear foot when compared to the rest of the San Pedro Creek main stem.

I certify that the Abstract is a correct representation of the content of this paper.

Jerry D. Davis

Date

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TABLE OF CONTENTS

List of Tables.....	vii
List of Figures.	viii
List of Photos.....	x
Introduction.....	1
Physical and Human Setting.....	7
Physical.....	7
Watershed Geology.....	7
Watershed Soils.....	10
Watershed Geomorphology.....	10
Watershed Climate.....	12
Watershed Vegetation.....	13
Watershed Land Use.....	14
Human.....	16
Pre-Human Period.....	16
Native American Period.....	19
Mission Period.....	20
Mexican Ranch Period.....	23
Farming Period.....	24
Urbanization Period.....	26
Study Area.....	28
Middle Fork Watershed.....	31
North Fork Watershed.....	36
Literature Review.....	39
Early Studies.....	40
Grazing and Farming.....	41
Urbanization.....	46
Impervious Surface Area.....	46
Runoff.....	49

Sediment.....	52
Fluvial Geomorphic Response.....	56
Impacts of Urbanization.....	58
Research Methods.....	60
Proposed Solutions.....	65
Methods.....	69
Previous and Concurrent Studies.....	69
Methods Specific to this Study.....	71
Results and Discussion.....	83
Impervious Surface Area and Drainage Density.....	83
Rainfall.....	88
February 11 Storm Rainfall.....	94
February 13 Storm Rainfall.....	95
February 14 Storm Rainfall.....	97
Field Measured Discharge.....	98
November Discharge Measurements.....	99
January 30 Discharge Measurements.....	102
February 11 Discharge Measurements.....	102
February 12 Discharge Measurements.....	105
February 27 Discharge Measurements.....	106
Discharge to Stage Relationships.....	107
Storm Response.....	109
February 11 Storm Response.....	109
February 13 Storm Response.....	116
February 14 Storm Response.....	123
Storm Response Summary.....	126
Channel Response.....	129
Profile and Cross-Section.....	129
Bank Erosion.....	138
Conclusion.....	141
References.....	152

LIST OF TABLES

Table	Page
1. Monthly Rainfall Comparison Showing Percent Greater by Gage.....	90
2. Summary of Characteristics for the Three Study Storms	128

LIST OF FIGURES

Figure	Page
1. Location Map of San Pedro Creek Watershed.....	2
2. Geology Map of San Pedro Creek Watershed.....	8
3. Land Use Map of San Pedro Creek Watershed.....	15
4. 1853 Historical Map of Lower San Pedro Valley.....	18
5. Study Area Map.....	30
6. Impacts of Impervious Cover.....	47
7. Land Use and Sediment Yield.....	53
8. Watts Branch Cross-Sections.....	61
9. Impervious Cover in San Pedro Creek Watershed.....	84
10. North Fork Stormdrain Network.....	86
11. Monthly Rainfall Comparison for Three Rain Gages.....	90
12. Daily and Monthly Precipitation at San Pedro Valley Park, 2000 WY.....	91
13. Daily Rain Comparison for the Month of February, 2000.....	93
14. Rainfall Intensity and Duration for the February 11, 2000 Storm.....	95
15. Rainfall Intensity and Duration for the February 13, 2000 Storm.....	96
16. Rainfall Intensity and Duration for the February 14, 2000 Storm.....	97
17. Daily Rainfall and Periodic Field Measured Discharge.....	101
18. Middle Fork Relationship of Discharge and Stage.....	108

19. North Fork Relationship of Discharge and Stage.....	108
20. Middle Fork Rain, Discharge and Turbidity, February 11, 2000 Storm.....	114
21. North Fork Rain, Discharge and Turbidity, February 11, 2000 Storm.....	115
22. Middle Fork Rain, Discharge and Turbidity, February 13, 2000 Storm.....	121
23. North Fork Rain, Discharge and Turbidity, February 13, 2000 Storm.....	122
24. Middle Fork Rain, Discharge, and Turbidity, February 14, 2000 Storm.....	124
25. North Fork Rain, Discharge, and Turbidity, February 14, 2000 Storm.....	125
26. Average Turbidity for the Three Study Storms.....	127
27. Middle Fork Longitudinal Profile, 1999 and 2000.....	130
28. Middle Fork Cross-Section #1, 1999 and 2000.....	133
29. Middle Fork Cross-Section #2, Stream Gage Station, 1999 and 2000.....	133
30. North Fork Longitudinal Profile, 1999 and 2000.....	136
31. Middle and North Fork Cross-Section at Confluence.....	137
32. Bank Erosion Volume Per Linear Foot.....	140

LIST OF PHOTOS

Photo	Page
1. Gully on Cattle Hill.....	11
2. 1941 Aerial Photo of Agriculture in San Pedro Valley	25
3. Typical Residential Land Use in San Pedro Valley	27
4. Middle Fork Gage Station.....	74
5. North Fork Gage Station Inside Culvert	76
6. North Fork Culvert.....	76
7. Pressure Transducer, Turbidity Sensor, Data Logger	77
8. North Fork Culvert flows During the February 11, 2000 Storm.....	104
9. Middle Fork Transition Flows During the February 11, 2000 Storm	105
10. Middle Fork Cross-Section #1	132
11. Middle Fork Cross-Section #2 Looking Downstream at Stream Gage	134