

**STUDY ON BED MATERIAL  
CHARACTERISTICS AND BED LOAD  
CONCENTRATION IN SUNGAI JEMBERAU  
AT TASIK CHINI**

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**B. ENG (HONS.) CIVIL ENGINEERING**

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## **SUPERVISOR'S DECLARATION**

“I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Civil Engineering (Hons)”

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## **STUDENT'S DECLARATION**

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

---

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STUDY ON BED MATERIAL CHARACTERISTIC AND BED LOAD  
CONCENTRATION IN SUNGAI JEMBERAU AT TASIK CHINI

NURUL SYAMIMI BINTI BANG NAMIN

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## DEDICATION

This thesis dedicated to my parents, my family and friends for without their inspiration, coaching and enthusiasm none of this would be happened.  
Thanks for everything...

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## LIST OF SYMBOLS

Q	Flow Rate of Water ( $\text{m}^3/\text{s}$ )
A	Area ( $\text{m}^2$ )
V	Velocity (m/s)
mm	Millimetre
km	Kilometre
m	Meter (m)
g	Gravitational Force ( $\text{m}/\text{s}^2$ )
$n_s$	Manning Coefficient
$\tau_c$	Critical Shear Stress
$\tau_0$	Actual Shear Stress
$D_s$	Mean Diameter (mm)
$\nu$	Viscosity ( $\text{m}^2/\text{s}$ )
$\gamma$	Specific Weight ( $\text{N}/\text{m}^3$ )
S	Slope
Gs	Bed Load Discharge (lb/sec-ft)
d	Depth of River
B	Width of River



## **LIST OF ABBREVIATIONS**

UMP	University Malaysia Pahang
USCS	Unifies Soil Classification System
US	United State
Cu	Uniformity Coefficient
Cc	Coefficient of Gradation
Nov	November
Dec	December
pH	Potential Hydrogen
TSS	Total Suspended Solid
HACH DR 5000	Spectrophotometer Procedures Manual