



**C-Change Community of Practice Meeting
Ottawa, October 29-31, 2012**

**Perth-Andover Case Study
Exercise: Utility Measurement**

Name: _____

Email: _____

Introduction – Utility Measurement Exercise

The purpose of this exercise is to define the risk attitudes of decision makers with respect to the expected impacts of community damage measures for the Perth-Andover decision problem for developing and evaluating strategies for flood response.

Task

Your task is to define the intermediate utility of damage estimates for a subset of the Community Profile elements in the Perth-Andover Problem Formulation (Table 7 of the Case Study document). In the following tables you are asked to indicate the “utility” of intermediate damage values for the set of 5 measures representing elements of the Problem Formulation for the sustainability pillars. These measures are: (1) Parks/Trails/Community Fields (Environmental Pillar); (2) Public Works: Roads (Economic Pillar); (3) Seniors’ Infrastructure (Social Pillar); and (4) Schools (Cultural Pillar).

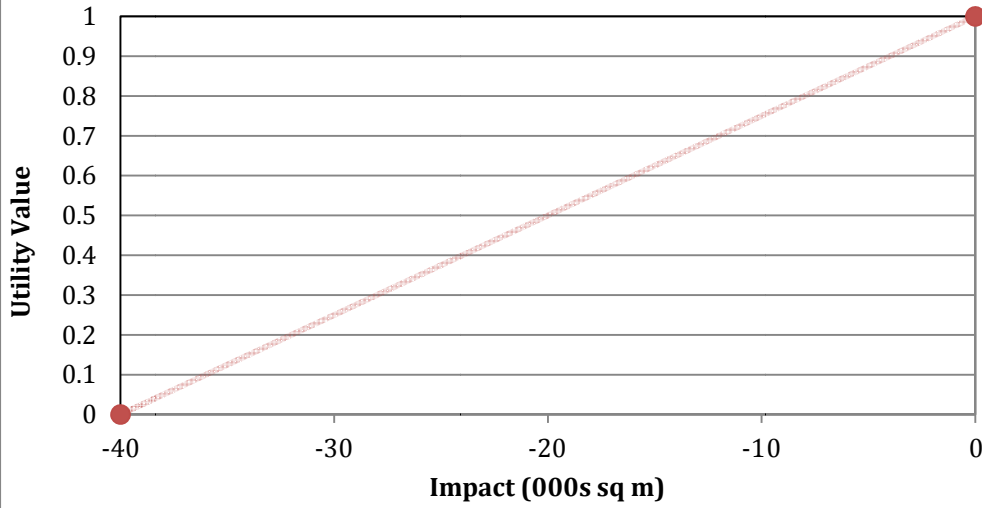
Your responses will be compiled and returned to you via email. The response will indicate: (1) the utility function of the measures; and (2) the assumed risk attitude (risk seeking, risk neutral, risk averse).

Instructions

Please note the “utility” (i.e., your relative satisfaction) of the intermediate damage/loss positions for each of the 5 Community Profile elements on the graphics below. The graphics present the estimated damages over the range of expected outcomes for the measures. These include the definition of 2 “anchor” points for your assignment: (1) the ideal status quo (no flood threat) position (Utility value assigned as “1”); and the worst case flood damage for each measure (e.g., the 82.5 m flood scenario) The 5 measure graphics are presented on the following page.

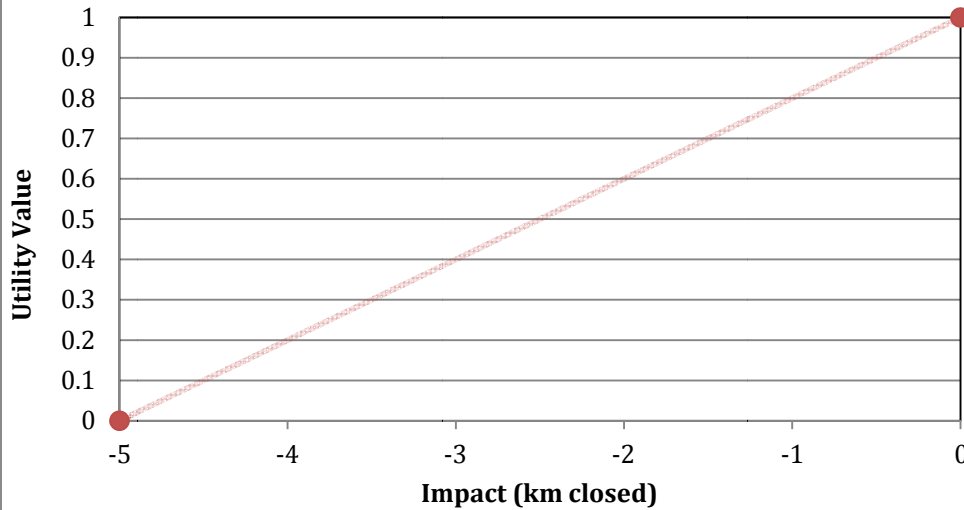


Parks/Trails/Community Fields Utility



Flood Scenario	Impact	Utility
Worst Case	-40	0
82.5 m	-30	
81.5 m	-25	
80.25 m	-20	
No flood	0	1

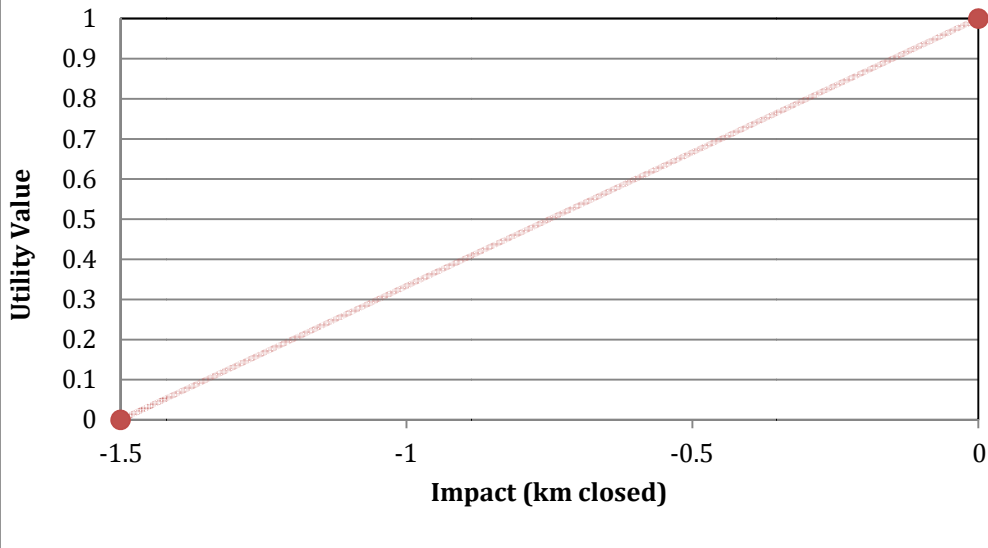
Public Works: Roads Utility



Flood Scenario	Impact	Utility
Worst Case	-5	0
82.5 m	-4.7	
81.5 m	-3.6	
80.25 m	-2.6	
No flood	0	1

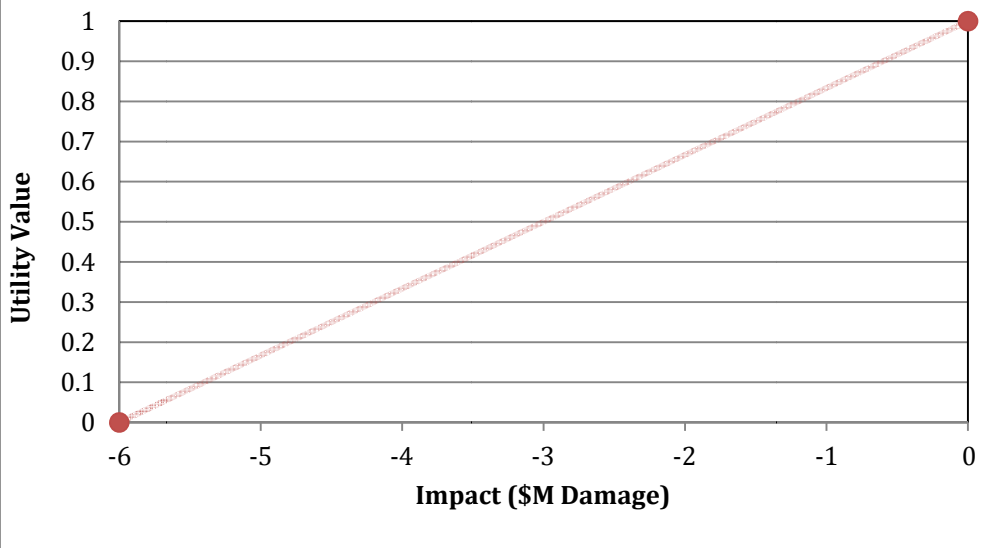


Seniors' Infrastructure Utility



Flood Scenario	Impact	Utility
Worst Case	-1.5	0
82.5 m	-1	
81.5 m	-0.5	
80.25 m	-0.2	
No flood	0	1

Schools Flooded Utility



Flood Scenario	Impact	Utility
Worst Case	-6	0
82.5 m	-5	
81.5 m	-4	
80.25 m	-3	
No flood	0	1