ECONOMIST

ECONOMICS ANALYSIS

1. ESTIMATE ECONOMIC EFFECTS OF ALTERNATIVES

   * FLOOD DAMAGE FOR 100-YEAR EVENT

   * NUMBER OF IMPACTED STRUCTURES

2. COMPARE BASIC ALTERNATIVES

   * 100-YEAR EVENT (EXISTING CONDITION)

   * 100-YEAR +1 FOOT (FUTURE CONDITION)

     50% STORAGE UTILIZATION

WHAT HAPPENS OVER TIME

EXISTING CONDITION

STRUCTURE "A" FLOODED

FUTURE CONDITION

* STRUCTURE "A" FLOODED MORE SEVERELY

* STRUCTURE "B"ALSO FLOODED

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FLOOD DAMAGE MODEL

* INPUTS

  - LAND USE — STRUCTURE TYPE
    GROUND ELEVATION
    FIRST FLOOR ELEVATION

  - FLOOD STAGES BY EVENT
  - DEPTH DAMAGE CURVES

* OUTPUTS

  - STRUCTURE & CONTENT DAMAGES BY EVENT

  - NUMBER OF STRUCTURES BY TYPE

  - DEPTH OF FLOODING

  - DAMAGE/EVENT

IMPACT OF 100-YEAR FLOOD ON DEADMAN'S RUN

	Existing Conditions	100-Year Flood Plus One Foot	50 Percent Storage Depletion
Number of Structures			
Residential	561	698	585
Commercial	44	58	56
Total	605	756	641
Structure Value			
Reseidential	$ 49,869,200	$ 60,140,300	$ 52,216,400
Commercial	$ 8,157,600	$ 10,283,300	$ 9,857,000
Total	$ 58,026,800	$ 70,423,600	$ 62,073,400
Flood Damage			
Reseidential	$ 27,407,000	$ 37,514,197	$ 29,801,775
Commercial	$ 4,476,277	$ 5,232,551	$ 4,695,759
Total	$ 31,883,277	$ 42,746,748	$ 34,497,534

COMPARISON OF POLICY SCENARIOS

	One Foot Rise	50% Loss Of Storage	Losses for One Foot Rise Less losses for 50% loss of storage
Additional Structures Flooded			
Residential	137	21	113
Commercial	14	12	2
Total	151	33	115
Additional Structure Value Threatened			
Residential	$ 10,271,100	$ 2,347,200	$ 7,923,900
Commercial	$ 2,125,700	$ 1,699,400	$ 426,300
Total	$ 12,396,800	$ 4,046,600	$ 8,350,200
Residential	$ 10,107,197	$ 2,394,775	$ 7,712,422
Commercial	$ 756,274	$ 219,482	$ 536,792
Total	$ 10,863,471	$ 2,614,257	$ 8,249,214

Table 1

Impacts of 100-year Flood on Deadman's Run – Varying Conditions

	Existing Conditions	100-Year Flood Plus One-Foot	50 Percent Storage Loss
Number of Structures			
Residential	561	698	585
Commercial	44	58	56
Total	605	756	641
Structure Value			
Residential	$49,869,200	$60,140,300	$52,216,400
Commercial	$ 8,157,600	$10,283,300	$ 9,857,000
Total	$58,026,800	$70,423,600	$62,073,400
Flood Damages			
Residential	$27,407,000	$37,514,197	$29,801,775
Commercial	$ 4,476,277	$ 5,232,551	$ 4,695,759
Total	$31,883,277	$42,746,748	$34,497,534

Table 2

Comparison of Alternative Floodplain Regulations to Existing Conditions

	Alternative 1 One Foot Rise	Alternative 2 50 Percent Loss of Storage	Difference Alternative 1 less Alternative 2
Additional Structures Flooded			
Residential	137	24	113
Commercial	14	12	2
Total	151	36	115
Additional Structure Value Threatened			
Residential	$10,271,100	$2,347,200	$7,923,900
Commercial	$ 2,125,700	$1,699,400	$ 426,300
Total	$12,396,800	$4,046,600	$8,350,200
Additional Flood Damages			
Residential	$10,107,197	$2,394,775	$7,712,422
Commercial	$ 756,274	$ 219,482	$ 536,792
Total	$10,863,471	$2,614,257	$8,249,214

APPENDIX - A

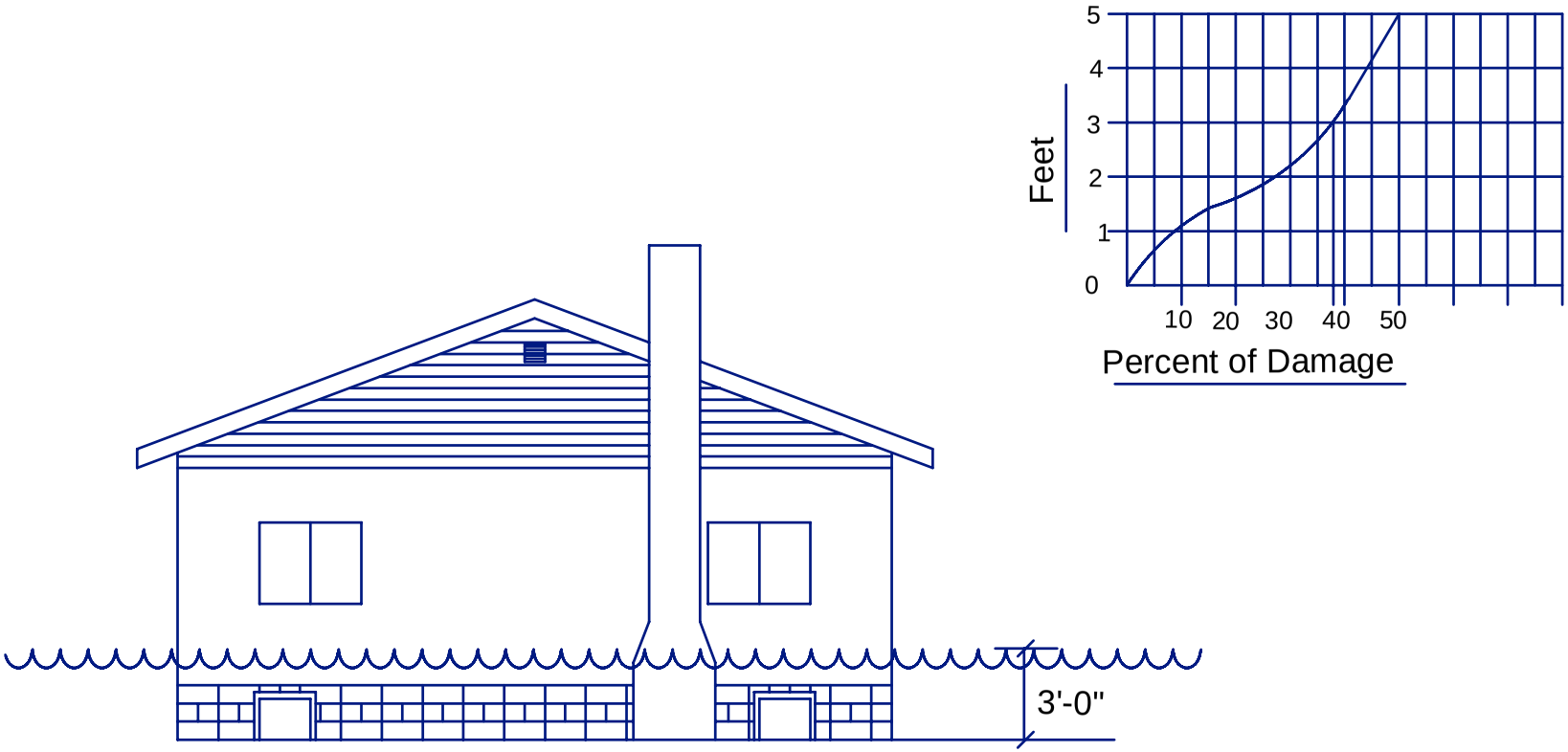
DEADMAN'S RUN - 100-YEAR FLOOD PLAIN INFORMATION BY REACH

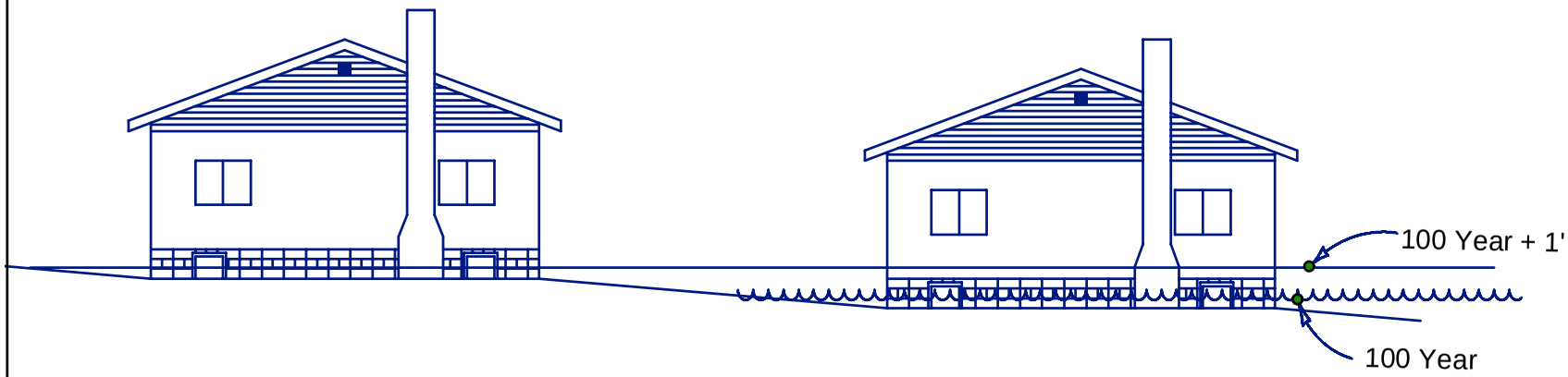
TABLE A1 - NUMBER OF STRUCTURES

	Existing Condition		One Foot Rise		50% Storage Reduction	
REACH	Residential	Commercial	Residential	Commercial	Residential	Commercial
33rd to 38th	195	14	242	27	210	25
38th to 48th	213	12	214	13	214	13
48th to 56th	153	18	242	18	161	56
Total	561	44	698	58	585	94

TABLE A2 - STRUCTURE VALUE

REACH	Existing Condition		One Foot Rise		50% Storage Reduction	
	Residential	Commercial	Residential	Commercial	Residential	Commercial
33rd to 38th	$17,458,700	$ 2,438,300	$20,363,900	$ 4,384,000	$19,296,000	$ 3,957,700
38th to 48th	$21,277,310	$ 4,413,800	$21,351,610	$ 4,593,800	$21,351,610	$ 4,593,800
48th to 56th	$11,133,190	$ 1,305,500	$18,424,790	$ 1,305,500	$11,568,790	$ 1,305,500
Total	$49,869,200	$ 8,157,600	$60,140,300	$10,283,300	$52,216,400	$ 9,857,000


5
4
3
2
1
0
Feet
10
20
30
40
50
Percent of Damage
3'-0"


100 Year + 1'
100 Year