**KEY & RUBRIC (110 points possible)**

**I. Identifying stakeholders (23 points possible)**

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| **Stakeholder type** | **Example of stakeholder type****1 point for each appropriate example****(5 points possible)** | **Role (Latent, Promoter, Apathetic, or Defender)****1 point for each role identified****(5 points possible)** |
| Governments |  |  |
| Reasons for choosing role (1-2 sentences) | **2 points for each set of reasons for choosing role (1 point for discussion of high/low interest, 1 point for discussion of high/low power; 10 points possible)** |
| Interest Groups |  |  |
| Reasons for choosing role (1-2 sentences) |  |
| Businesses |  |  |
| Reasons for choosing role (1-2 sentences) |  |
| Scientific Experts |  |  |
| Reasons for choosing role (1-2 sentences) |  |
| Vulnerable Citizens |  |  |
| Reasons for choosing role (1-2 sentences) |  |
| Reasons for high vulnerability (1-2 sentences) | **3 points for reasons for vulnerability (1 point each for discussions of exposure, sensitivity, and adaptive capacity)** |

**II. Selecting strategies (15 points possible)**

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| **Name of structural strategy****1 point for naming a structural strategy****(3 points possible)** | **Hazards protected against****(erosion, wave action, storm surge flooding, sea-level rise flooding)****2 points for naming all hazards protected against (half credit for naming at least one hazard protected against; 6 points possible)** |
| 1) |  |
| 2) |  |
| 3) |  |

First, choose a non-structural strategy:

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| **1 point for naming a non-structural strategy** |

Then in a short paragraph (about five sentences), describe *at least three ways* in which your chosen non-structural strategy would work *in combination with the three structural strategies* to reduce exposure to the four hazards:

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| **5 points possible for paragraph:****0 – No answer.****1 – Describes only one way in which non-structural strategy would reduce exposure.****2 – Describes two ways in which non-structural strategy would reduce exposure.****3 – Describes at least three ways in which non-structural strategy would reduce exposure, but does not describe how it would work in combination with any of the structural strategies.****4 – Describes at least three ways in which non-structural strategy would reduce exposure. Also describes how it would work in combination with one of the structural strategies.****5 – Describes at least three ways in which non-structural strategy would reduce exposure. Also describes how it would work in combination with two or more of the structural strategies.** |

**III. Assessing costs and benefits (45 points possible)**

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| **Name of structural strategy** | **Possible Costs** | **Possible Benefits** |
| 1) **1 point for each strategy named (4 points possible)** | **2 points for including all costs presented earlier in module (half credit for naming at least one cost; 8 points possible)** | **2 points for including all benefits presented earlier in module (half credit for naming at least one benefit; 8 points possible)** |
| 2) |  |  |
| 3) |  |  |
| **Name of non-structural strategy** | **Possible Costs** | **Possible Benefits** |
| 1) |  |  |

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| **Name of structural strategy** | **Costs score** **(1-10)** | **Benefits score** **(1-10)** | **Benefits/costs ratio** |
| 1) **1 point for each strategy named (4 points possible)** | **1 point for each costs score (4 points possible)** | **1 point for each benefits score (4 points possible)** | **1 point for each benefits/costs ratio (4 points possible)** |
| 2) |  |  |  |
| 3) |  |  |  |
| **Name of non-structural strategy** | **Costs score** **(1-10)** | **Benefits score** **(1-10)** | **Benefits/costs ratio** |
| 1) |  |  |  |

Which strategy did you give the highest costs score? Why did you think this strategy would cost more than the others? If two strategies are tied, choose one to discuss. Answer in 1-2 sentences.

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| **3 points possible:****0 – No answer *or* incorrectly identifies highest costs score and does not explain rationale for choice.****1 – Correctly identifies highest costs score, but does not explain why; *or* incorrectly identifies highest costs score but provides at least limited explanation.****2 – Correctly identifies highest costs score but provides only limited explanation (explanation may be unconvincing or too short; for example it may describe why the most costly strategy is so expensive but fail to compare this strategy with the others).****3 – Correctly identifies highest costs score and provides detailed explanation, including comparison with the costs for other strategies.**  |

Which strategy did you give the highest benefits score? Why did you think this strategy would be more beneficial than the others? If two strategies are tied, choose one to discuss. Answer in 1-2 sentences.

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| **3 points possible:****0 – No answer *or* incorrectly identifies highest benefits score and does not explain rationale for choice.****1 – Correctly identifies highest benefits score, but does not explain why; *or* incorrectly identifies highest benefits score but provides at least limited explanation.****2 – Correctly identifies highest benefits score but provides only limited explanation (explanation may be unconvincing or too short; for example it may describe the positive outcomes of the most beneficial strategy but fail to compare this strategy with the others).****3 – Correctly identifies highest benefits score and provides detailed explanation, including comparison with the benefits for other strategies.**  |

Which strategy is most cost effective (has the highest benefit/cost ratio)? If two strategies are tied, name the strategy with the highest benefits score. In 1–2 sentences, explain why you think this strategy is more cost effective than the other three strategies.

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| **3 points possible:****0 – No answer *or* incorrectly identifies highest benefits/costs ratio and does not explain rationale for choice.****1 – Correctly identifies highest benefits/costs ratio, but does not explain why; *or* incorrectly identifies highest benefits/costs ratio but provides at least limited explanation.****2 – Correctly identifies highest benefits/costs ratio but provides only limited explanation (explanation may be unconvincing or too short; for example it may describe the cost effectiveness of the strategy with the highest benefits/costs ratio but fail to compare this strategy with the others).****3 – Correctly identifies highest benefits/costs ratio and provides detailed explanation, including comparison with the benefit/cost ratios for other strategies.**  |

**IV. Considering views of vulnerable stakeholders (19 points possible)**

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| **Evaluation criteria (choose 3)** |
| Construction, maintenance, and operation costs required/avoided |
| Economic costs/benefits |
| Increased/decreased vulnerability |
| Environmental degradation/benefits |
| Negative/positive impacts on community design/livability |
| Decreased/increased equity |
| Inconsistency/consistency with local goals, plans |

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| **Evaluation criteria most important to vulnerable stakeholder****1 point for each criteria identified (3 points possible)** | **Reasons important to vulnerable citizen stakeholder? (1-2 sentences)****2 points possible for each (6 points possible overall)****0 – No answer** **1 – Answer is very short (incomplete sentences), difficult to understand, or does not give at least one plausible reason why chosen criteria would be important to stakeholder** **2 – In complete sentences, gives at least one plausible reason why chosen criteria would be important to stakeholder** |
| 1) |  |
| 2) |  |
| 3) |  |

|  |  |
| --- | --- |
| **Evaluation criteria most important to vulnerable stakeholder****1 point for each criteria identified (3 points possible)** | **Based on each of the three criteria, do you think the strategy identified as most cost effective (from part III) would cause *more benefit or more harm* to the vulnerable citizen stakeholder?** **1 point for each selection (3 points possible)** |
| 1) | More benefit | More harm (choose one) |
| 2) | More benefit | More harm (choose one) |
| 3) | More benefit | More harm (choose one) |

Overall, *based on all three evaluation criteria together*, do you think that the strategy would cause more benefit or more harm to the vulnerable citizen stakeholder? Explain your answer in 2-3 sentences.

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| **4 points possible:****0 – No answer.****1 – States whether they expect more overall benefit or harm, but does not explain answer.****2 – States whether they expect more overall benefit or harm. Explains answer based on only one of the three evaluation criteria.****3 – States whether they expect more overall benefit or harm. Explains answer based on only two of the three evaluation criteria; *or* explains answer based on all three evaluation criteria but answer is very short, uses incomplete sentences, or is difficult to understand.****4 – States whether they expect more overall benefit or harm. Explains answer based on all three evaluation criteria.** |

**V. Prioritizing places for protection (8 points possible)**

Paste screenshot here showing extent of flooding for 4 feet of sea-level rise:

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| **2 points possible:****0 – No answer *or* map shows wrong area and does not show extent of flooding for 4 feet of sea-level rise.****1 – Map shows wrong area but correct amount of sea-level rise flooding *or* map shows correct area but wrong amount of sea-level rise flooding.****2 – Map shows correct area and correct amount of sea-level rise flooding.** |

Using the labels on the map, describe the location of one area that could be prioritized for protection due to its high *physical vulnerability* to sea-level rise (1 sentence). TIP: Changing to “Streets” view (click “Streets” in the upper right-hand corner of the SLR Viewer window) adds more labels to the map (including street names), which may make it easier to describe a location.

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| **2 points possible:****0 – No answer.****1 – Location described does not appear to be in Norfolk area or is clearly not physically vulnerable.****2 – Location described is in Norfolk area and is physically vulnerable.** |

Paste screenshot here showing social vulnerability:

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| **2 points possible:****0 – No answer *or* map shows wrong area and does not show social vulnerability view.****1 – Map shows wrong area but correct social vulnerability view *or* map shows correct area but wrong social vulnerability view.****2 – Map shows correct area and correct social vulnerability view.** |

Using the labels on the map, describe the location of one area that could be prioritized for protection due to its high *social vulnerability* (1 sentence). TIP: Changing to “Streets” view (click “Streets” in the upper right-hand corner of the SLR Viewer window) adds more labels to the map (including street names), which may make it easier to describe a location.

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| **2 points possible:****0 – No answer.****1 – Location described does not appear to be in Norfolk area *or* is clearly not socially vulnerable.****2 – Location described is in Norfolk area and is socially vulnerable.** |