Model Diagram for the Human Health Receptor Class

Class | Media | Media Sub group | Layers Score layers

RISK → Human → Water

Human → Ecological

Water → GW → Domestic, PCWSW, NCWSW, Agriculture → Sum GW Receptor Score → Multiply by GW Pathway

Water → SW → SW intakes, Water Bodies → Sum SW Receptor Score → Multiply by SW Pathway

Sum GW and SW Scores → Multiply by Water SCS → Final Water Score

Soil → Residential, Schools → Sum Soil Receptor Score → Multiply by Soil Pathway → Multiply by Soil SCS → Final Soil Score

Vapor → Residential, Schools → Sum Vapor Receptor Score → Multiply by Vapor Pathway → Multiply by Vapor SCS → Final Vapor Score

Final Water Score / Final Soil Score / Final Vapor Score → Sum Media Scores → Final Human Health Score → Apply natural breaks → Final Human Health RPS Category
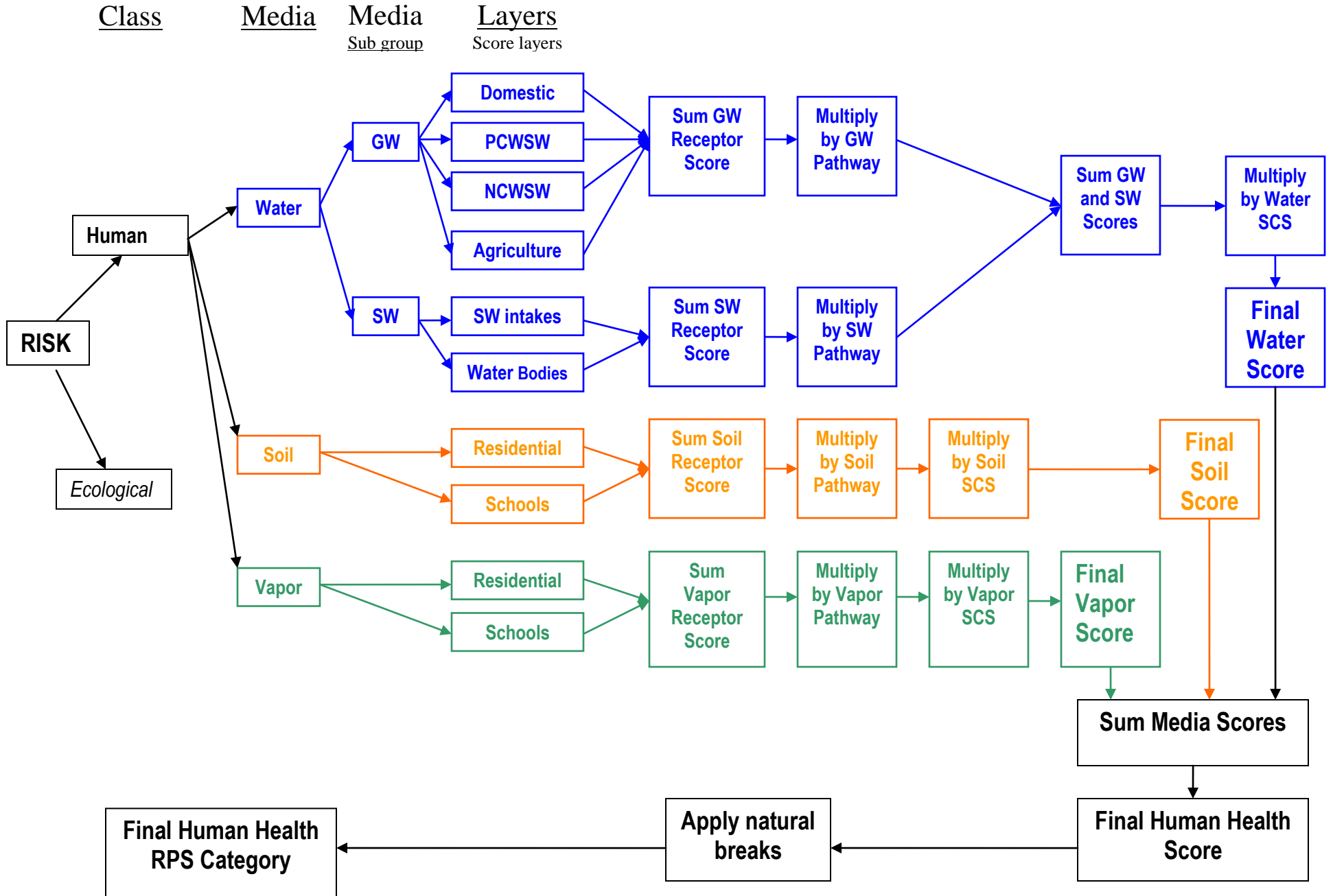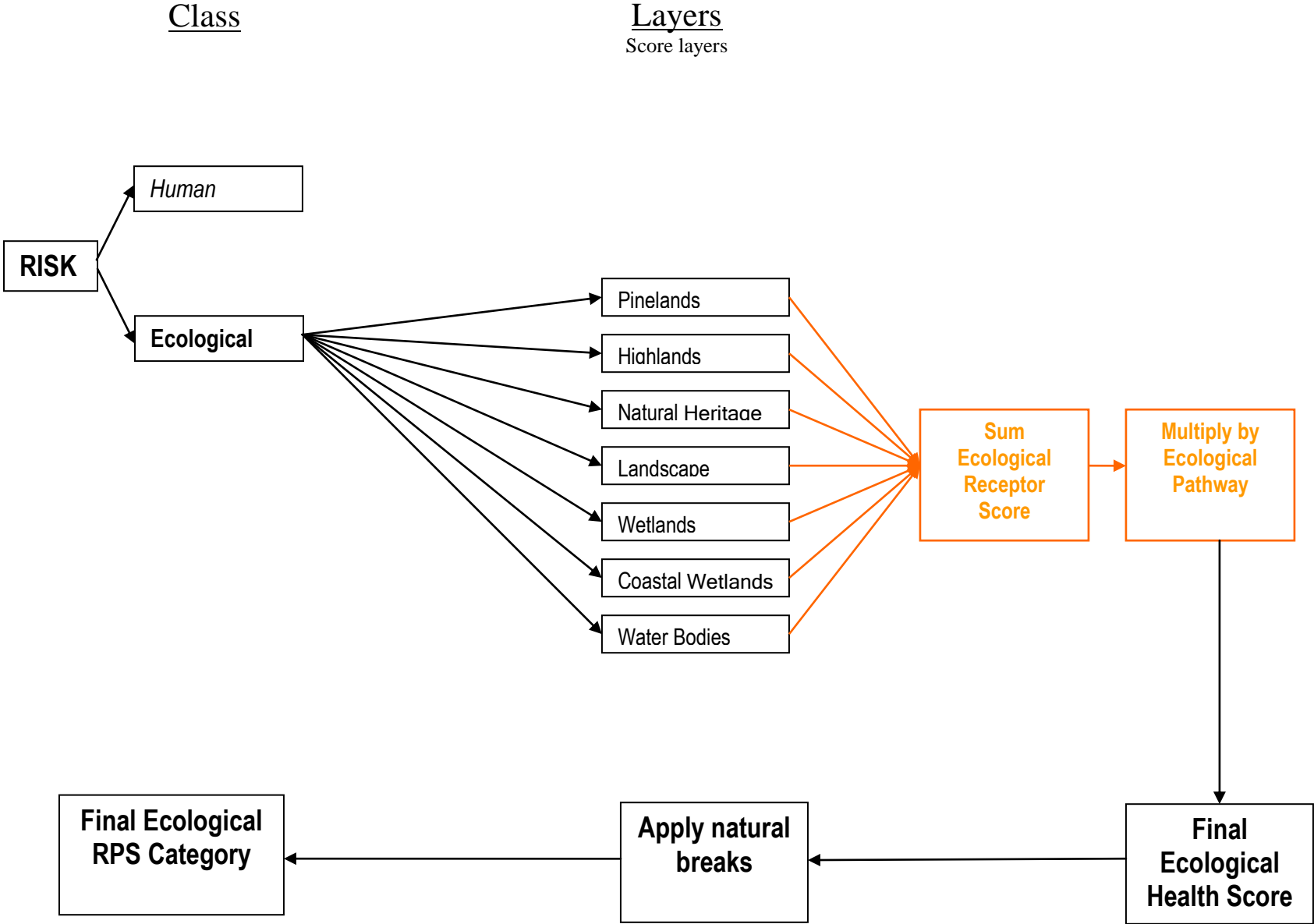
Human Health receptor Class Notes:

The RPS consists of 2 Classes: Human and Ecological

Human Class

1. The Human Health Class is subdivided in to 3 media (water, soil and vapor)
    - The Water Media consists of ground water and surface water
      GIS Layers have been created for potential exposure pathways for each media identified:
    a) Ground Water:
        i. Domestic: *based on domestic wells*
        ii. PCWSW: *based on well head protection areas for Public Community Water Supply Wells*
        iii. NCWSW: *based on well head protection areas for Non-Community Water Supply Wells*
        iv. Agricultural: *based on agricultural land use*
    b) Surface Water:
        i. SW intakes: *based on Surface Water sources of potable water*
        ii. Water Bodies: *based on Surface Water Quality Standards designation*
    c) Soil:
        i. Residential: *based on potential exposure of nearby residential population*
        ii. Schools: *based on potential exposure of nearby schools and day care facilities*
    d) Vapor:
        i. Residential: *based on potential exposure of nearby residential population*
        ii. Schools: *based on potential exposure of nearby schools and day care facilities*

2. **GIS Layers:** Receptors scores were generated for all GIS Layers based on the Extent Areas for each site

3. **Sum Receptor Scores:** The individual Media Receptor Scores are summed by Media (by sub-group for Water Media)

4. **Pathway Calculation:** The Media Receptor Score are multiplied by the appropriate pathway scores
    - **For Water Media:** The GW Score and SW Score are summed for one water score

5. **Site Condition Score:** The Water, Soil and Vapor Results from d. above are multiplied by the Water, Soil and Vapor Site Condition Score, respectfully to produce the Final score for each Media.

6. **Final Human Health Score:** The Final Water, Soil and Vapor Media Scores are summed to produce the Final Human Health Score

7. **Natural (Jenk's) breaks:** The final Human Health Score is divided into 5 categories using a natural breaks method.

8. **RPS Human Health Category:** Site are assigned an RPS Human Health Category based on the Natural Breaks established in g, above

Model Diagram for the Ecological receptor Class

Class

Layers
Score layers

RISK

Human

Ecological

Pinelands

Highlands

Natural Heritage

Landscape

Wetlands

Coastal Wetlands

Water Bodies

Sum Ecological Receptor Score

Multiply by Ecological Pathway

Final Ecological Health Score

Apply natural breaks

Final Ecological RPS Category

Ecological Receptor Class Notes:

The RPS consists of 2 Classes: Human and Ecological

Ecological Class

1. **GIS Layers**: GIS Layers have been created for Ecological Receptors
   a. Pinelands.
   b. Highlands
   c. Natural Heritage
   d. Landscape
   e. Wetlands
   f. Coastal Wetlands

2. Water Bodies (Surface Water Quality Standards designation)

3. Receptors scores were generated for all GIS Layers based on the ground water Extent Areas for each site

4. All of the Ecological Receptor Layers were summed

5. **Pathway Calculation:**

6. the Ecological Receptor Score is multiplied by the Ecological Pathway Score

7. **Final Human Health Score:** The value generated in d, above is the Final Ecological Health Score

8. **Natural (Jenk's) breaks:** The final Ecological Health Score is divided into 5 categories using a natural breaks method.

9. **RPS Human Health Category:** Site are assigned an RPS Ecological Health Category based on the Natural Breaks established in g, above