Prioritization Review

ESHMC

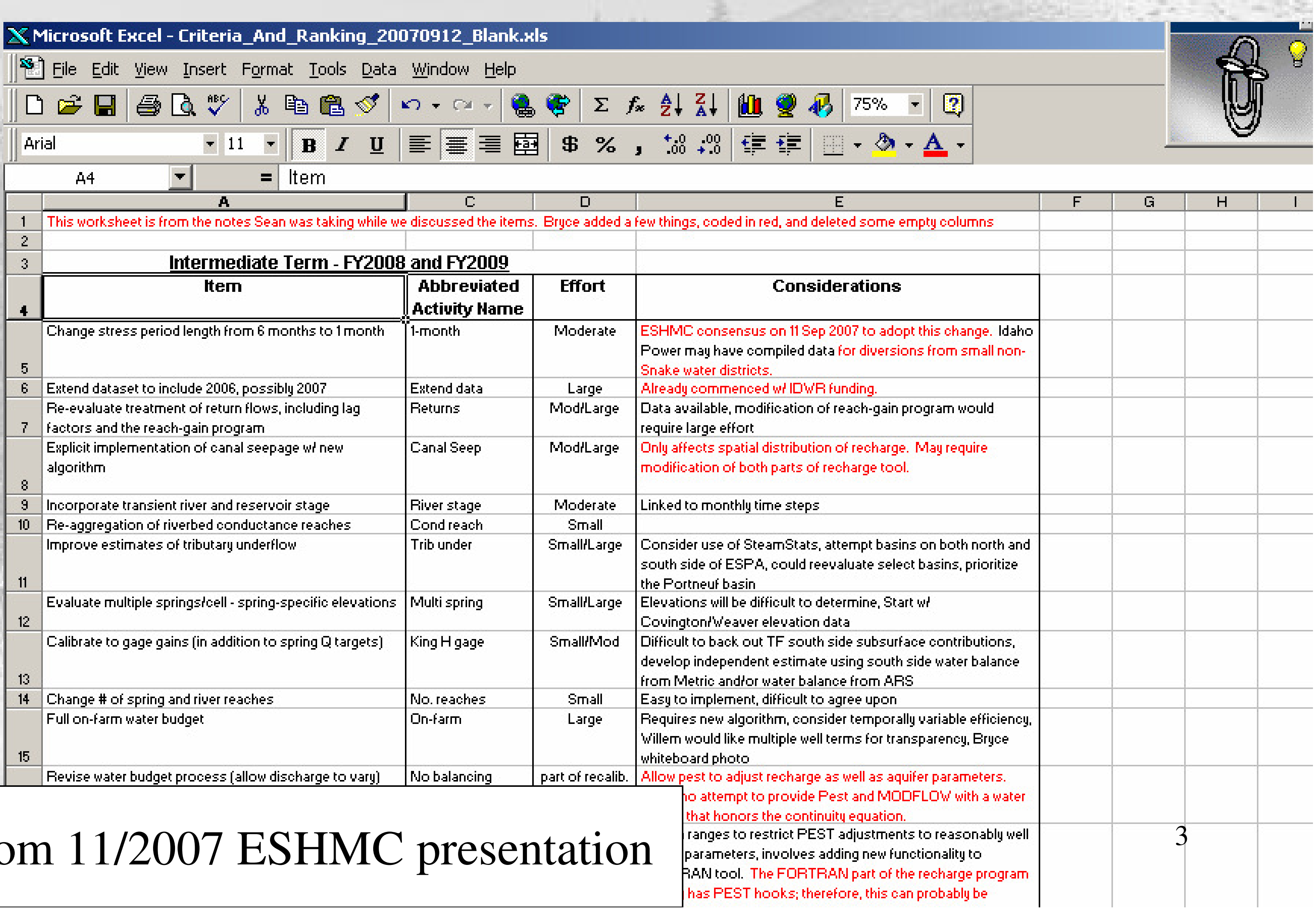
August 2008

B. Contor

Review

- In 2007 we brainstormed possible modifications to conceptual model & modeling procedures

List of activities from Sean's discussion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This worksheet is from the notes Sean was taking while we discussed the items. Bryce added a few things, coded in red, and deleted some empty columns

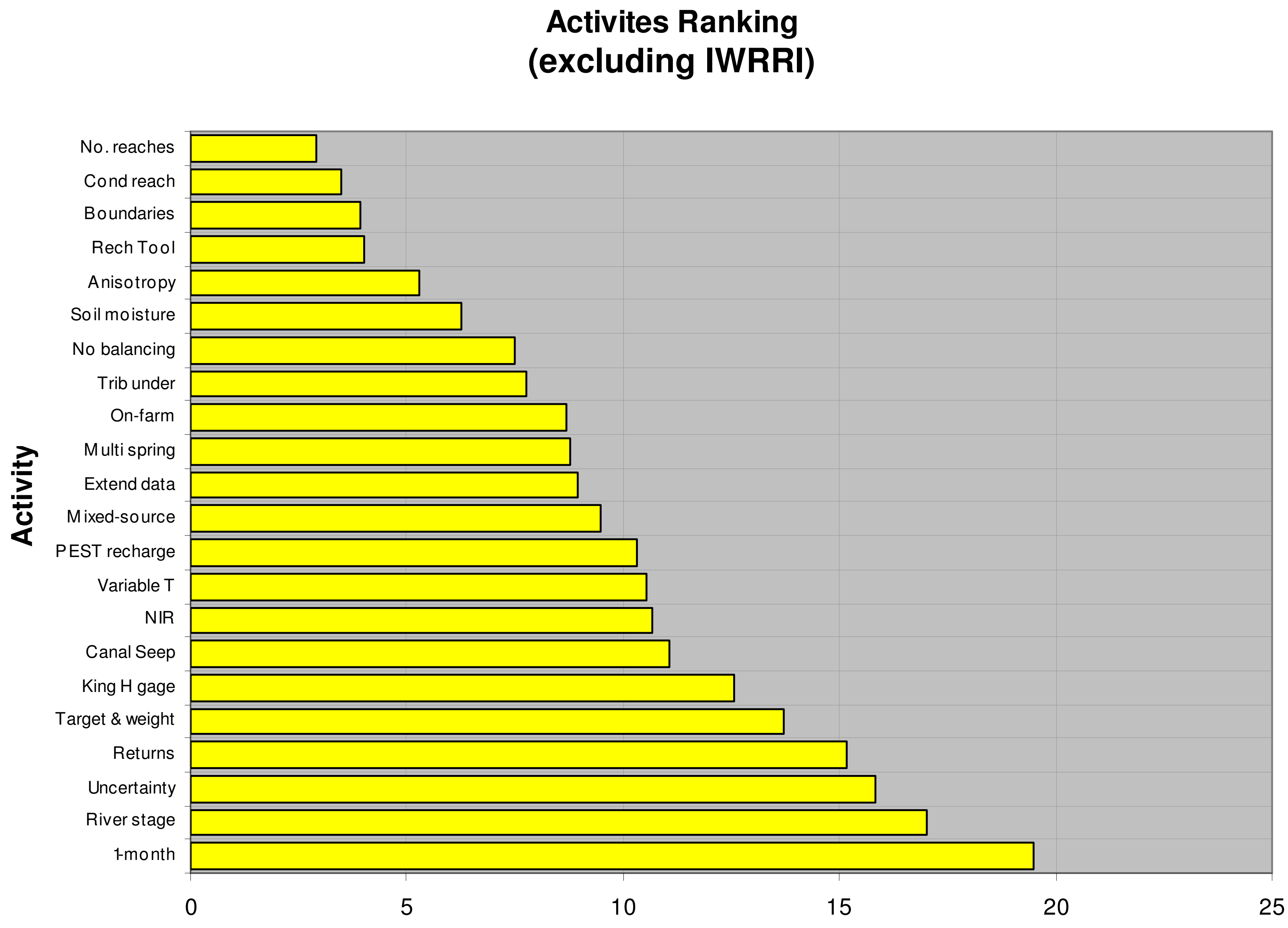
Intermediate Term - FY2008 and FY2009

	Item	Abbreviated Activity Name	Effort	Considerations
5	Change stress period length from 6 months to 1 month	1-month	Moderate	ESHMC consensus on 11 Sep 2007 to adopt this change. Idaho Power may have compiled data for diversions from small non-Snake water districts.
6	Extend dataset to include 2006, possibly 2007	Extend data	Large	Already commenced w/ IDWR funding.
7	Re-evaluate treatment of return flows, including lag factors and the reach-gain program	Returns	Mod/Large	Data available, modification of reach-gain program would require large effort
8	Explicit implementation of canal seepage w/ new algorithm	Canal Seep	Mod/Large	Only affects spatial distribution of recharge. May require modification of both parts of recharge tool.
9	Incorporate transient river and reservoir stage	River stage	Moderate	Linked to monthly time steps
10	Re-aggregation of riverbed conductance reaches	Cond reach	Small	
11	Improve estimates of tributary underflow	Trib under	Small/Large	Consider use of SteamStats, attempt basins on both north and south side of ESPA, could reevaluate select basins, prioritize the Portneuf basin
12	Evaluate multiple springs/cell - spring-specific elevations	Multi spring	Small/Large	Elevations will be difficult to determine, Start w/ Covington/Weaver elevation data
13	Calibrate to gage gains (in addition to spring Q targets)	King H gage	Small/Mod	Difficult to back out TF south side subsurface contributions, develop independent estimate using south side water balance from Metric and/or water balance from ARS
14	Change # of spring and river reaches	No. reaches	Small	Easy to implement, difficult to agree upon
15	Full on-farm water budget	On-farm	Large	Requires new algorithm, consider temporally variable efficiency, Willem would like multiple well terms for transparency, Bryce whiteboard photo
	Revise water budget process (allow discharge to vary)	No balancing	part of recalib.	Allow pest to adjust recharge as well as aquifer parameters. no attempt to provide Pest and MODFLOW with a water that honors the continuity equation.
				ranges to restrict PEST adjustments to reasonably well parameters, involves adding new functionality to RAN tool. The FORTRAN part of the recharge program has PEST hooks; therefore, this can probably be

From 11/2007 ESHMC presentation

Review

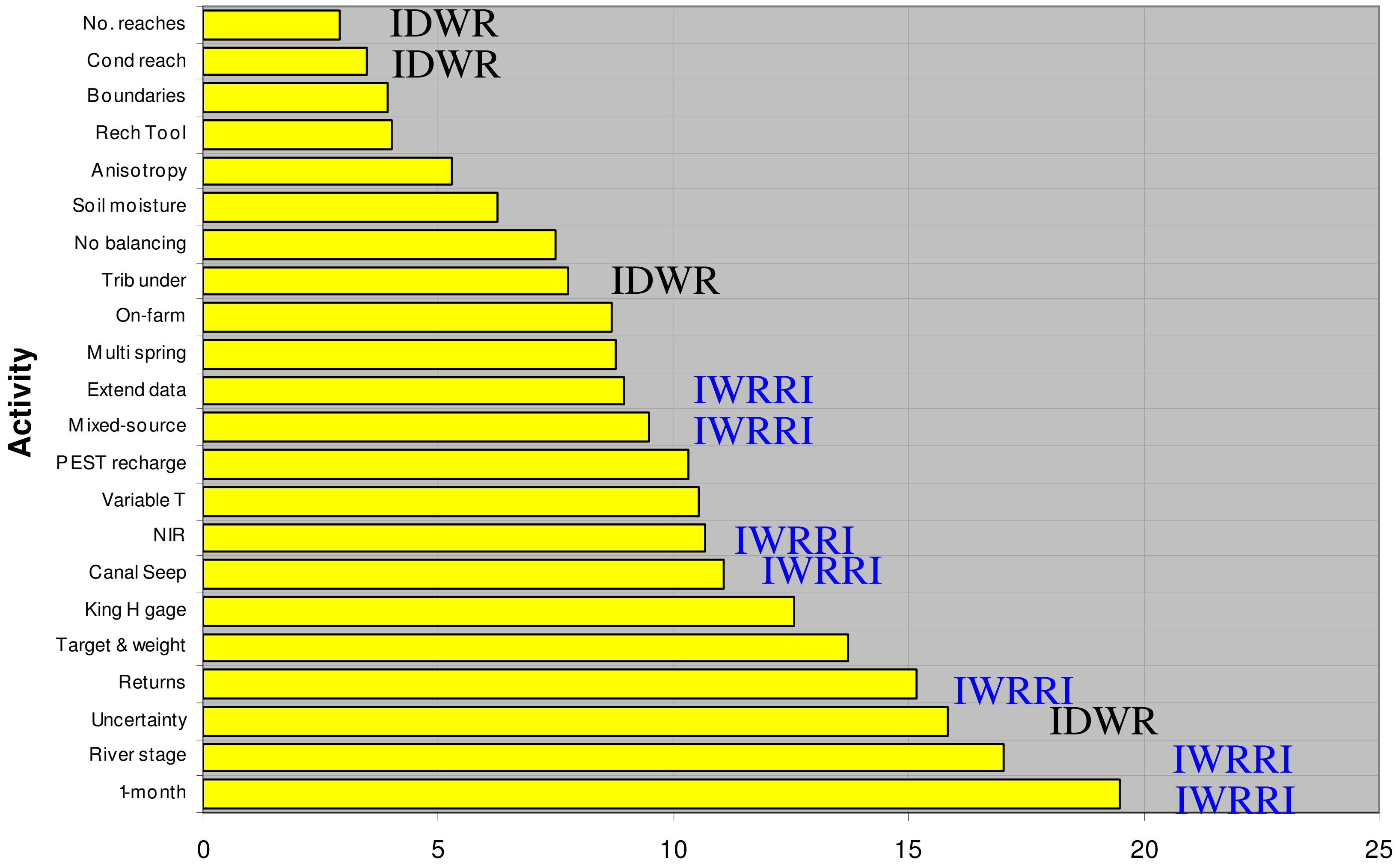
- We all ranked the activities & summarized



referred activities)

From 11/2007 ESHMC presentation

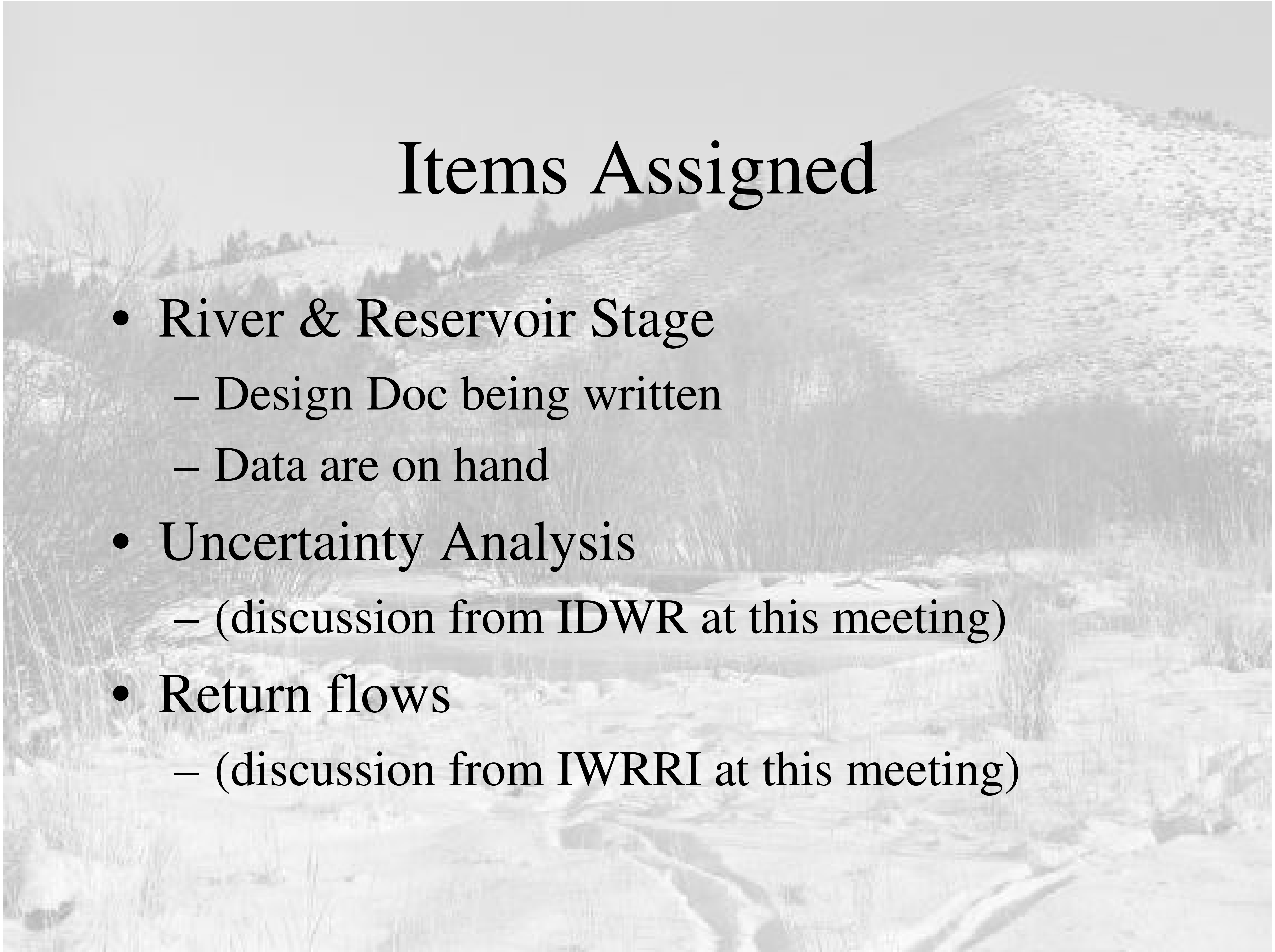
Activites Ranking
(excluding IWRRI)



(high numbers mean preferred activities)

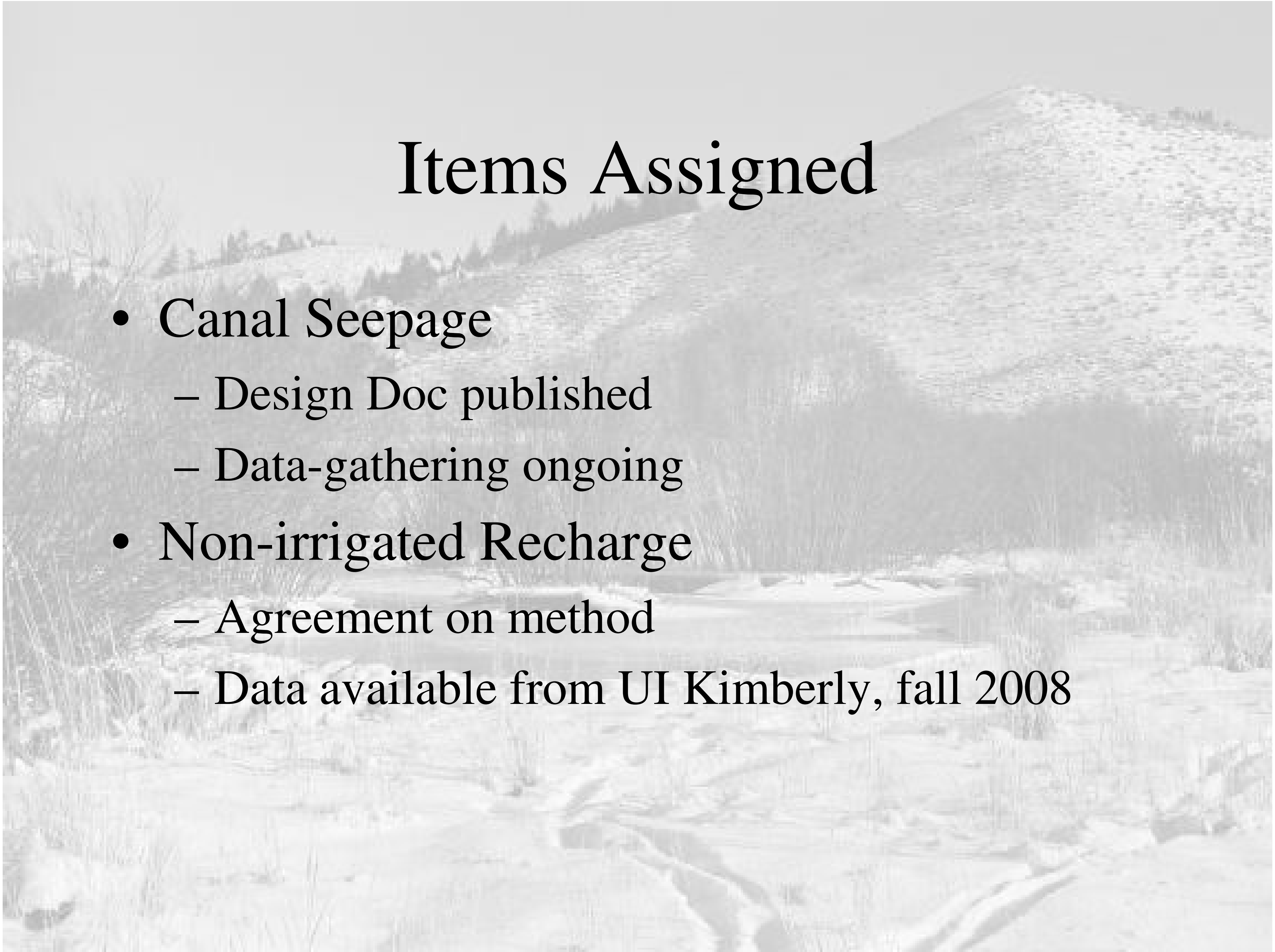
Items Assigned

- 1-month Stress Periods
  - – Design Document in review
  - – Data collection ongoing
  - – Requires small mod. to recharge tools
    - FORTRAN mod complete
    - GIS mod nearly complete



Items Assigned

- River & Reservoir Stage
  - – Design Doc being written
  - – Data are on hand
- Uncertainty Analysis
  - – (discussion from IDWR at this meeting)
- Return flows
  - – (discussion from IWRRI at this meeting)

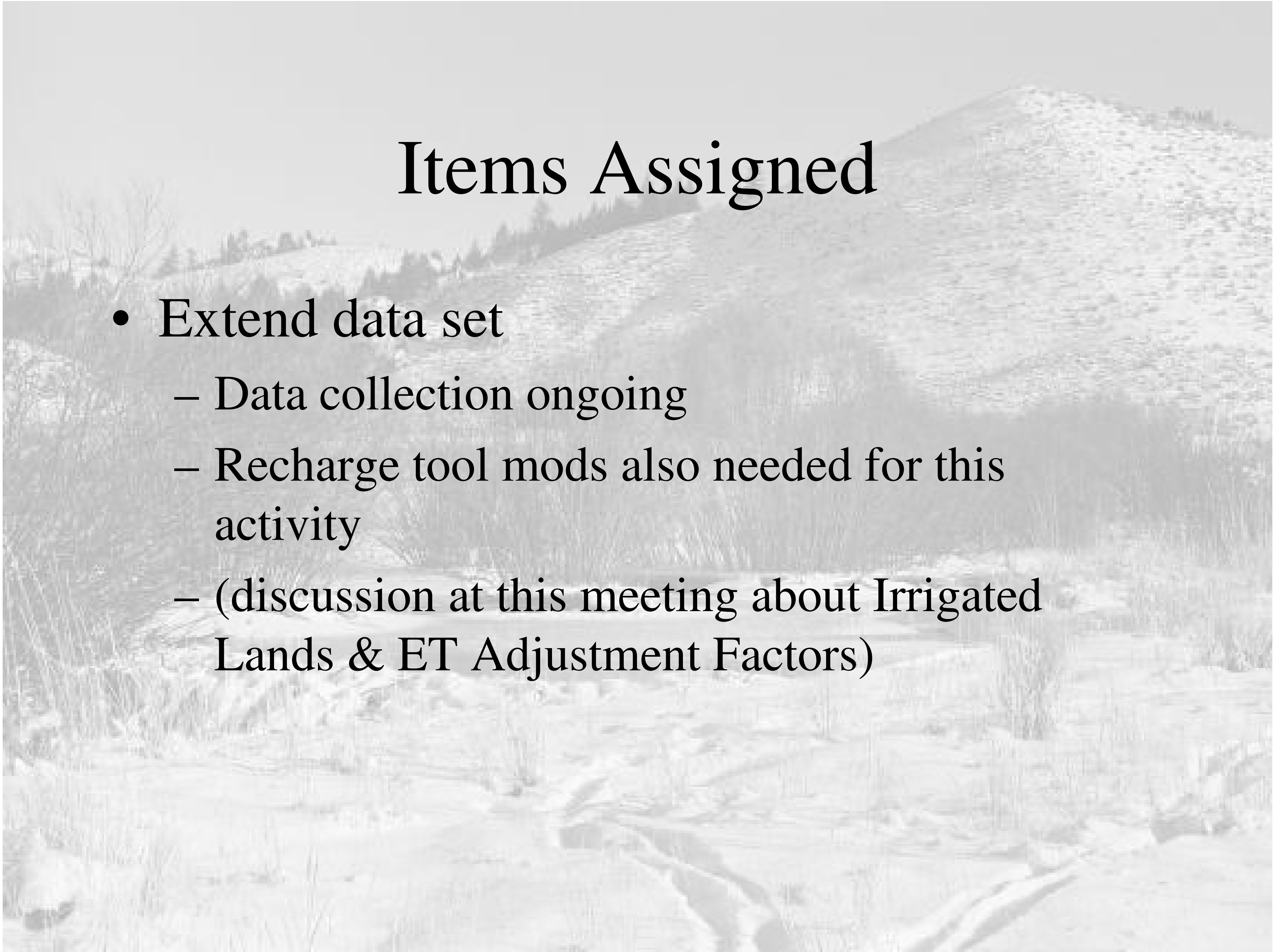


Items Assigned

- Canal Seepage
  - Design Doc published
  - Data-gathering ongoing
- Non-irrigated Recharge
  - Agreement on method
  - Data available from UI Kimberly, fall 2008

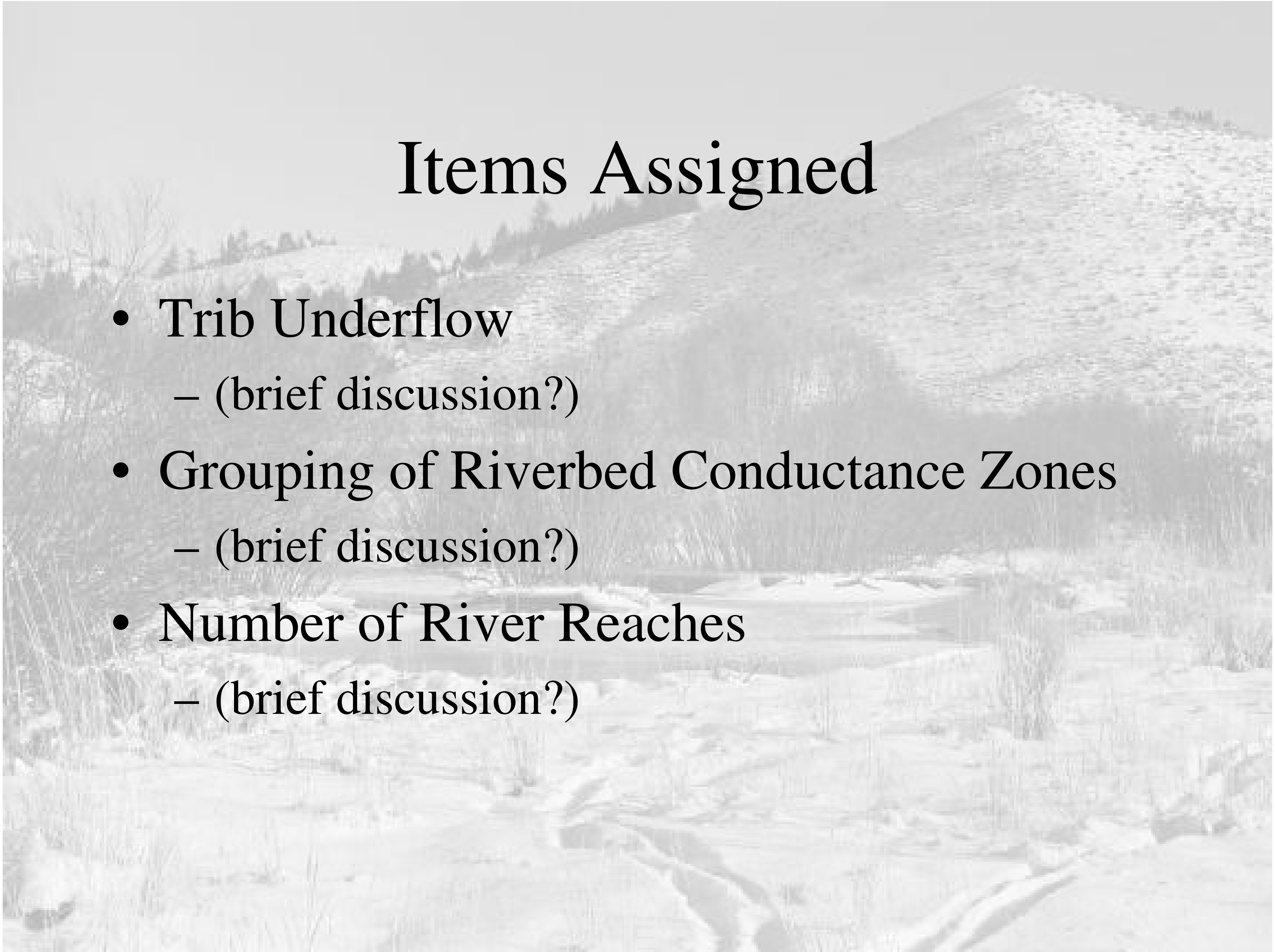
Items Assigned

- Recharge on Mixed-source Lands
  - Design Doc in review
  - Data are on hand



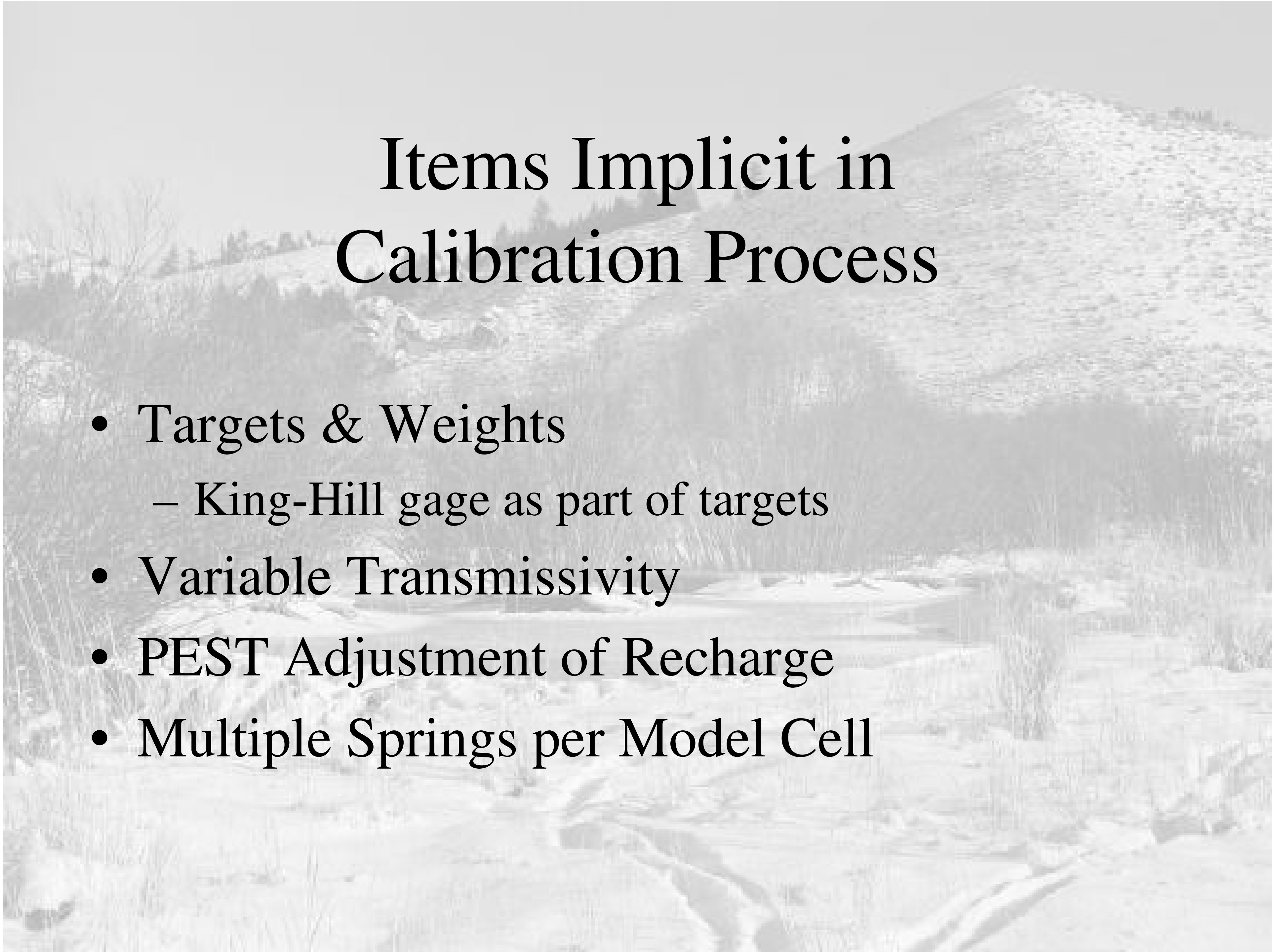
Items Assigned

- Extend data set
  - – Data collection ongoing
  - – Recharge tool mods also needed for this activity
  - – (discussion at this meeting about Irrigated Lands & ET Adjustment Factors)



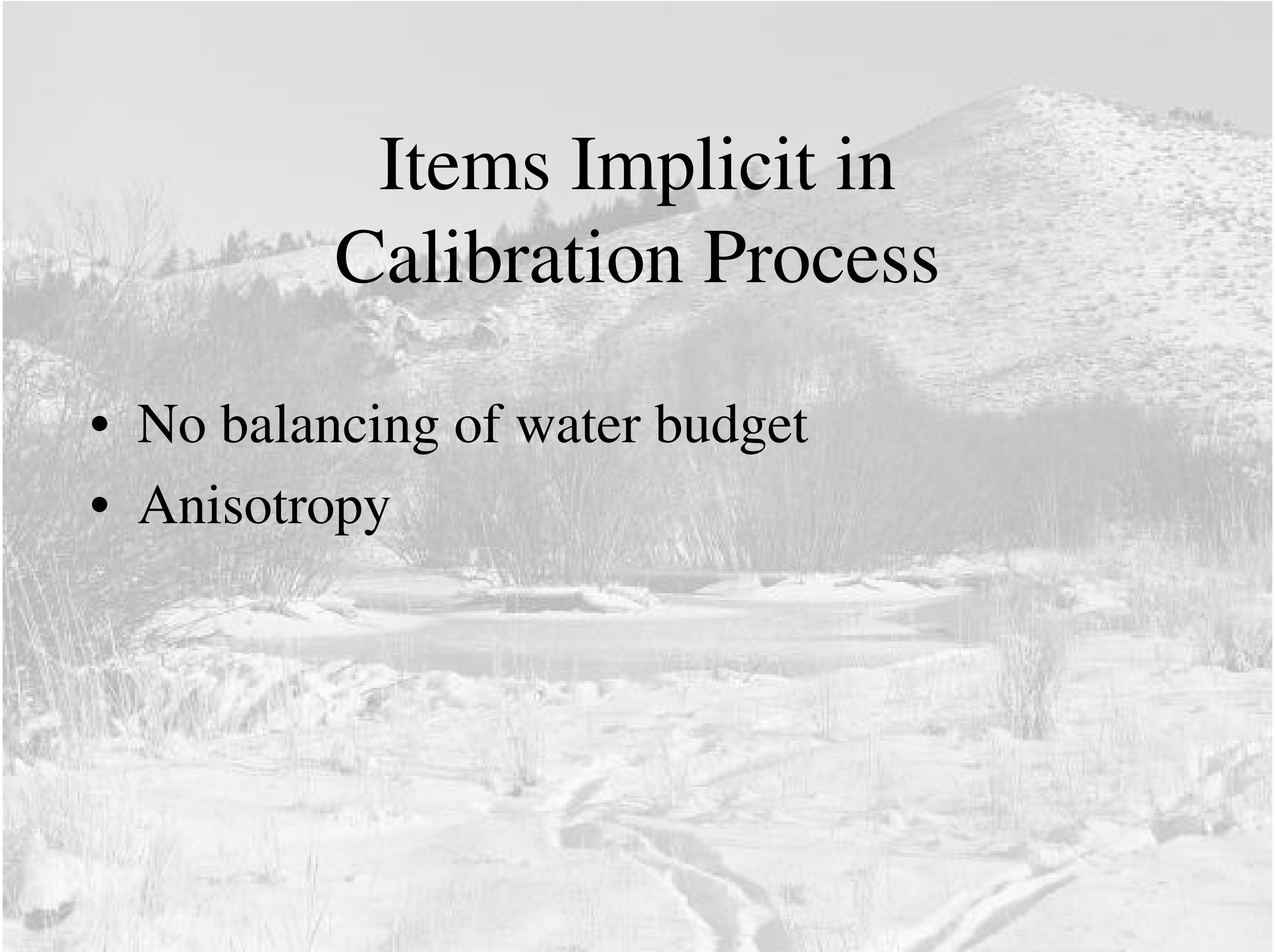
Items Assigned

- Trib Underflow
  - (brief discussion?)
- Grouping of Riverbed Conductance Zones
  - (brief discussion?)
- Number of River Reaches
  - (brief discussion?)



Items Implicit in Calibration Process

- Targets & Weights
  - King-Hill gage as part of targets
- Variable Transmissivity
- PEST Adjustment of Recharge
- Multiple Springs per Model Cell

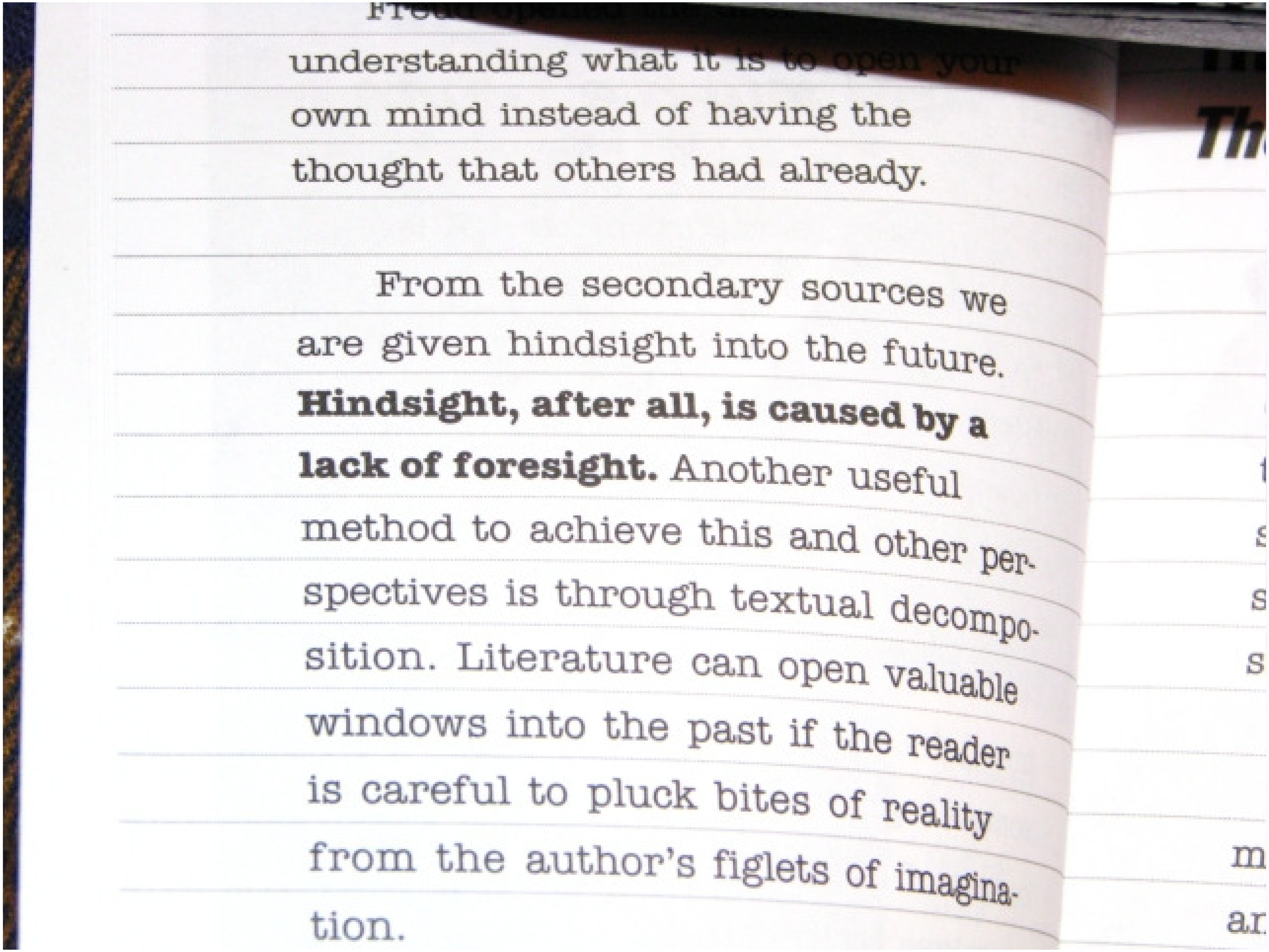


Items Implicit in Calibration Process

- No balancing of water budget
- Anisotropy

Items Not Assigned

- On-farm Water Budgets
- Soil Moisture
- Recharge Tool
- Revised Model Boundaries



understanding what it is to open your own mind instead of having the thought that others had already.

From the secondary sources we are given hindsight into the future. **Hindsight, after all, is caused by a lack of foresight.** Another useful method to achieve this and other perspectives is through textual decomposition. Literature can open valuable windows into the past if the reader is careful to pluck bites of reality from the author's figlets of imagination.