

Extent of Watershed Management

None (close to natural) to **Minimal** (some groundwater extraction, no large dams, no major imports or exports)

Moderate to **Extensive** (significant groundwater extraction, large dams, significant imports or exports)

Watershed Annual Water Balance

Watershed Annual Water Balance

$$Eq(3): P_{act} \approx$$

$$R + ET + \Delta_{TWS} + Exports - Imports$$

$$Eq(3): P_{act} \approx$$

$$R + ET + \Delta_{TWS} + Exports - Imports$$

$$Eq(4): P_{act} \approx$$

$$R + ET + \Delta_{GW^{natural}} + \Delta_{GW^{human}} + \Delta_{Reservoir} + Exports - Imports$$

$$Eq(4): P_{act} \approx$$

$$R + ET + \Delta_{GW^{natural}} + \Delta_{GW^{human}} + \Delta_{Reservoir} + Exports - Imports$$

Extent of UoP

Extent of UoP

None to Minimal

$$P_{obs} \approx P_{act}$$

Substantial

$$P_{obs} \ll P_{act}$$

None to Minimal

$$P_{obs} \approx P_{act}$$

Substantial

$$P_{obs} \ll P_{act}$$

Likely Scenarios

$$P_{obs} > R$$

$$P_{obs} \approx R + ET + \Delta$$

Spurious Scenarios

$$P_{obs} \leq R$$

$$P_{obs} \ll R + ET$$

Likely Scenarios

$$P_{obs} > R$$

Spurious Scenarios

$$P_{obs} \leq R$$