

USBWP Upcoming Projects (2019-2021)

Todd Blythe – Project Planner

June 6, 2019 Advisory Committee



Homegrown, Common-Sense Conservation

Upcoming Projects

- 1) Lower Lemhi Reference Reach
- 2) Hayden Creek Hermits
- 3) Hawley-Eighteenmile Junction

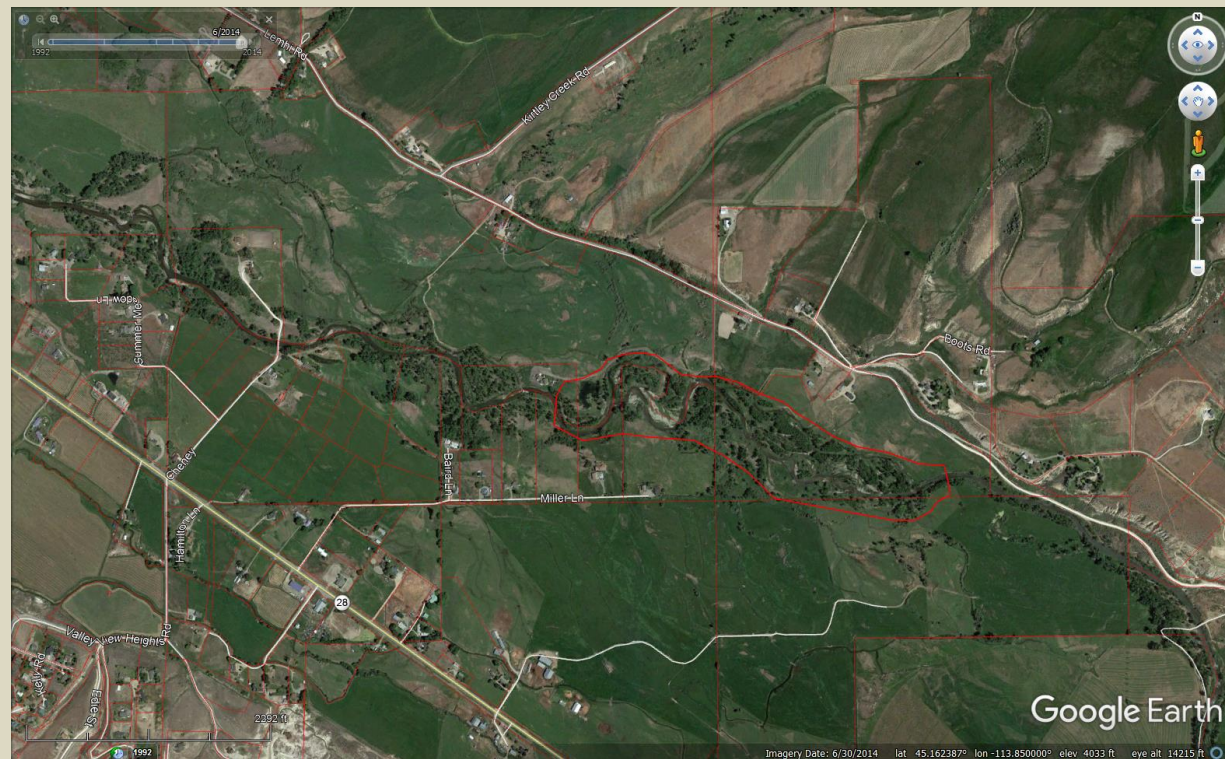
- All three projects have BPA funds for engineering

Upcoming Projects

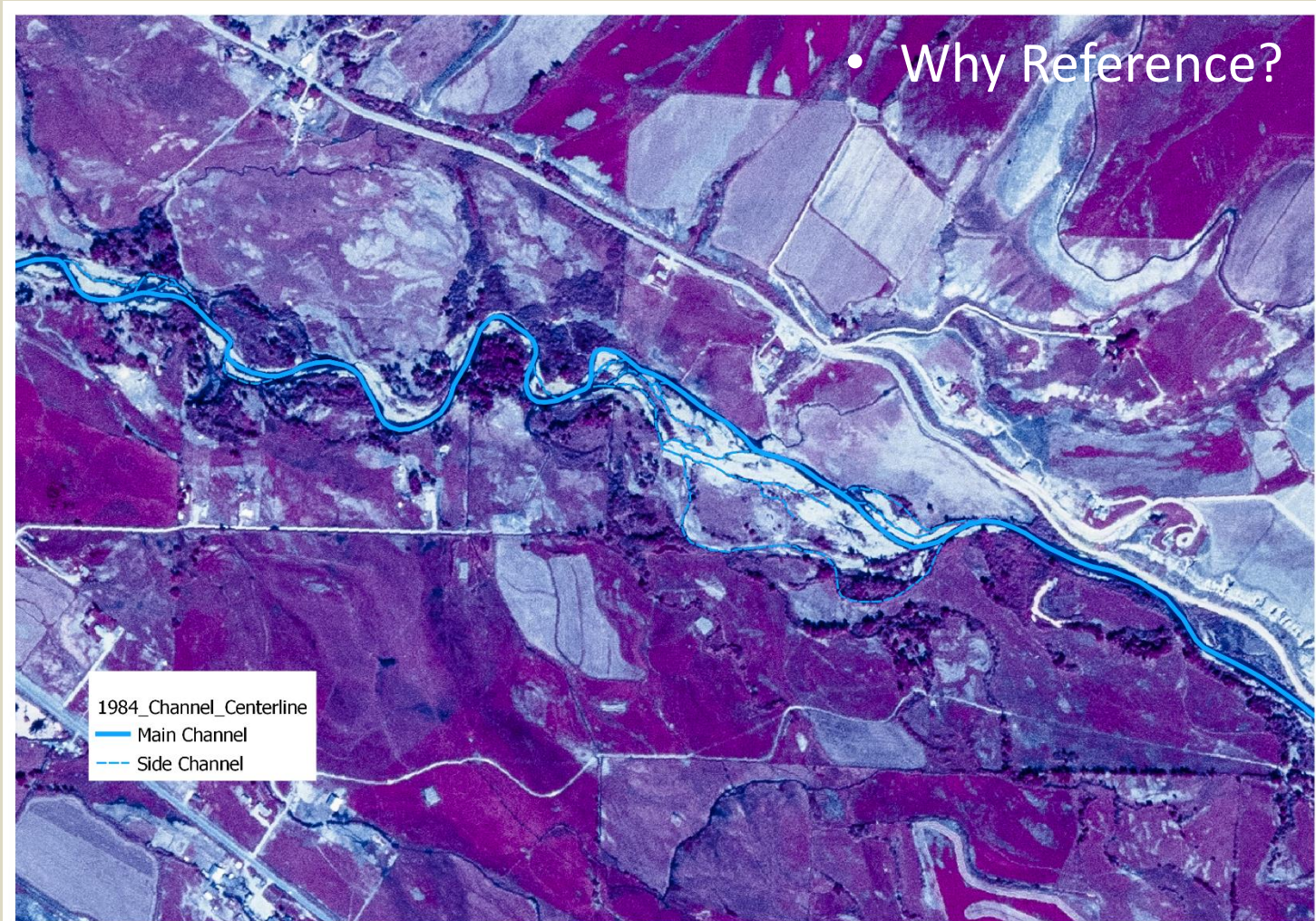
- 1) Lower Lemhi Reference Reach – Conserve Fish Habitat
 - 2) Hayden Creek Hermits – Create Fish Habitat
 - 3) Hawley-Eighteenmile Junction – Improve Water Quality
- All three projects have BPA funds for engineering

Lower Lemhi Reference Reach

- Approximately 1 mile stretch of the Lemhi
- No major alterations to the channel
- No development in the floodplain
- “Natural” river behavior

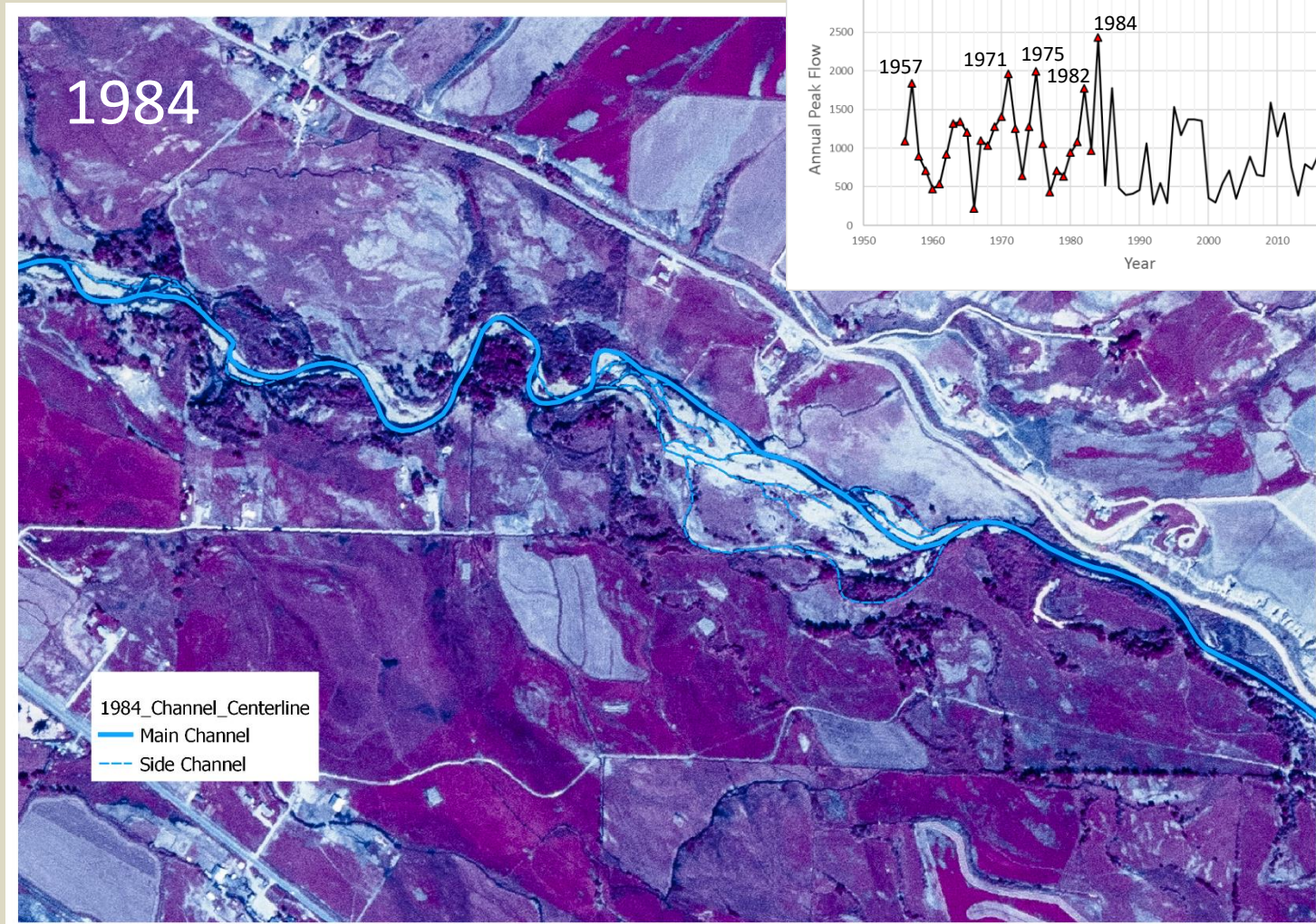


Lower Lemhi Reference Reach



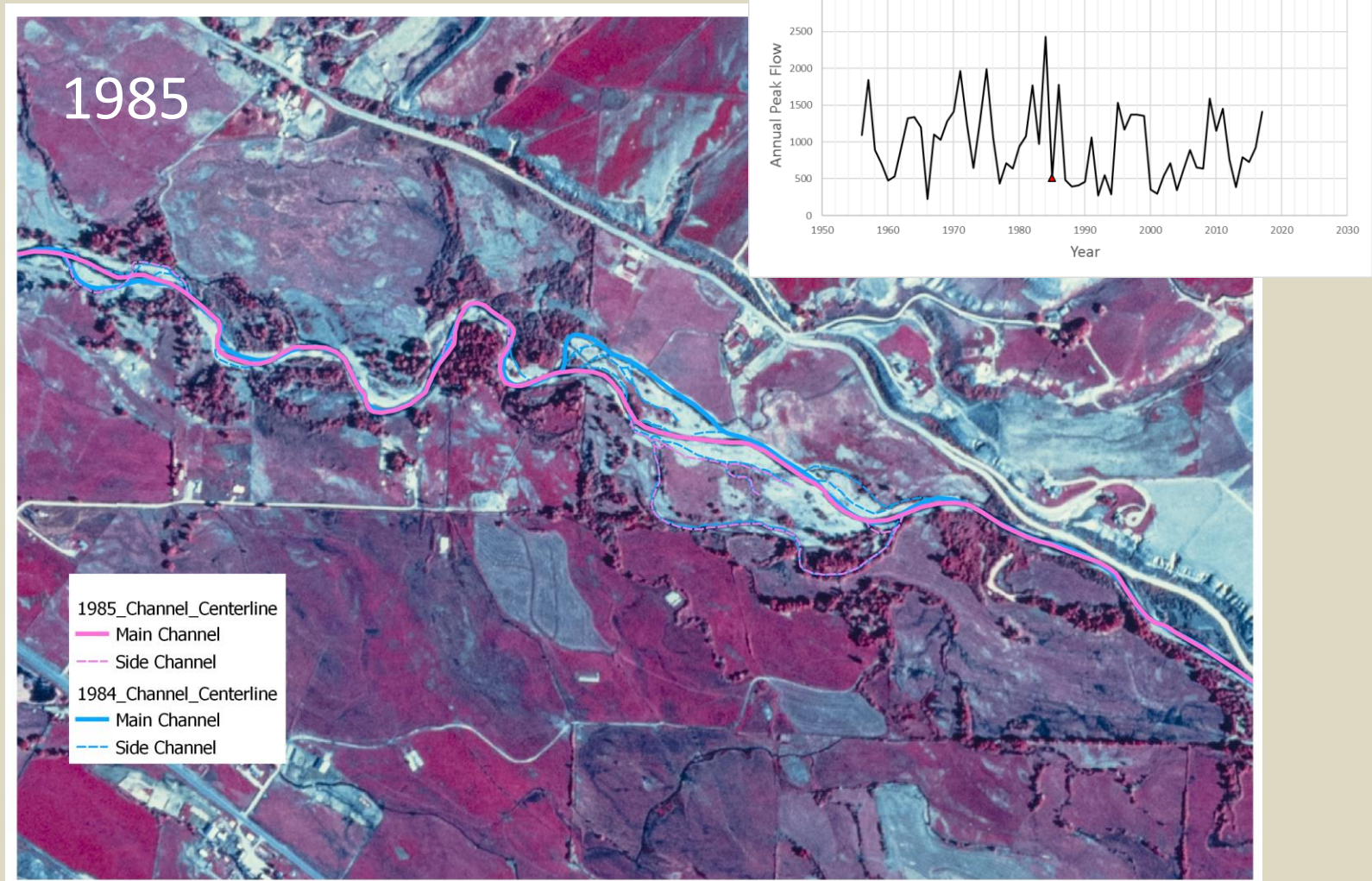
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Lower Lemhi Reference Reach

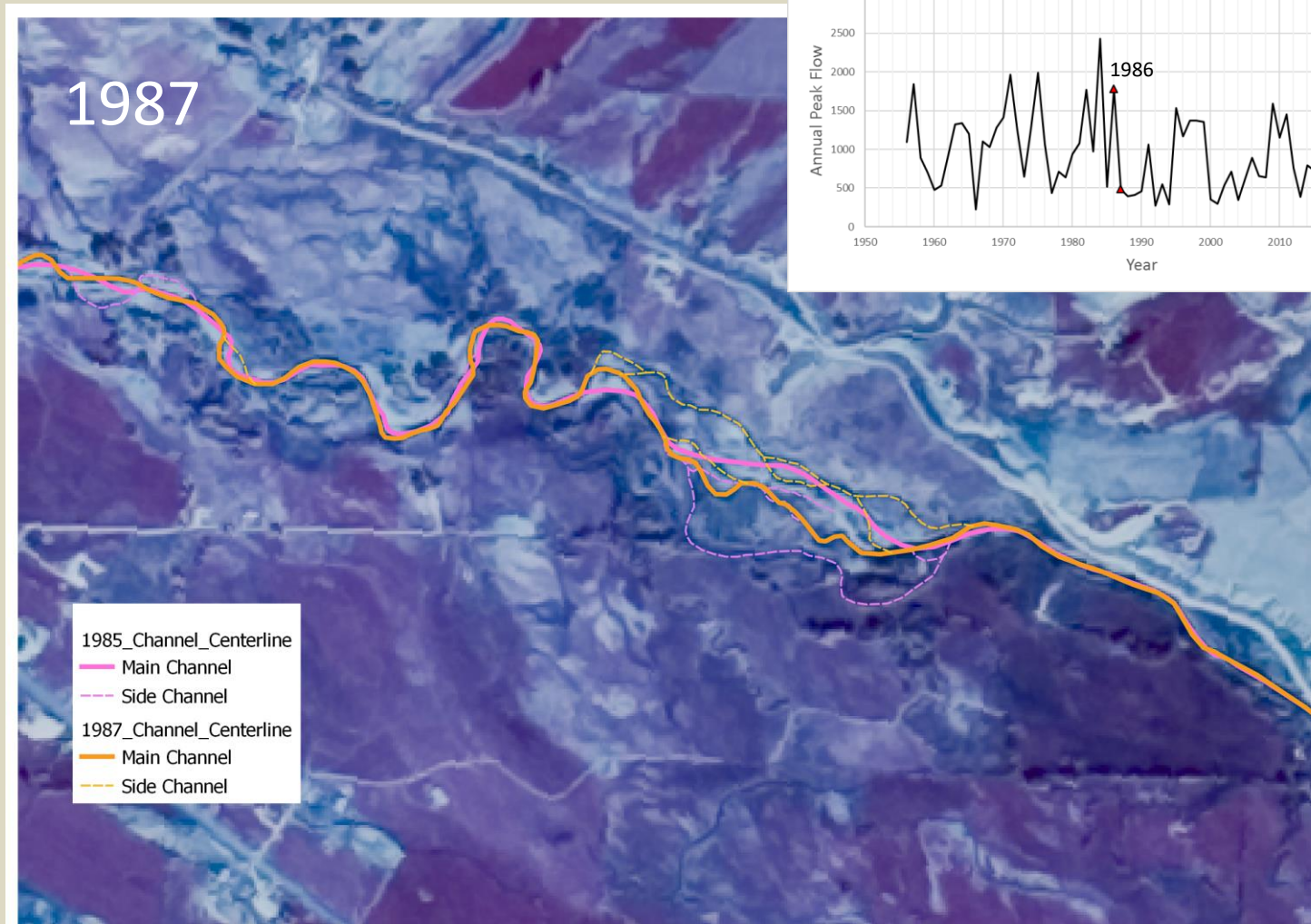


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Lower Lemhi Reference Reach

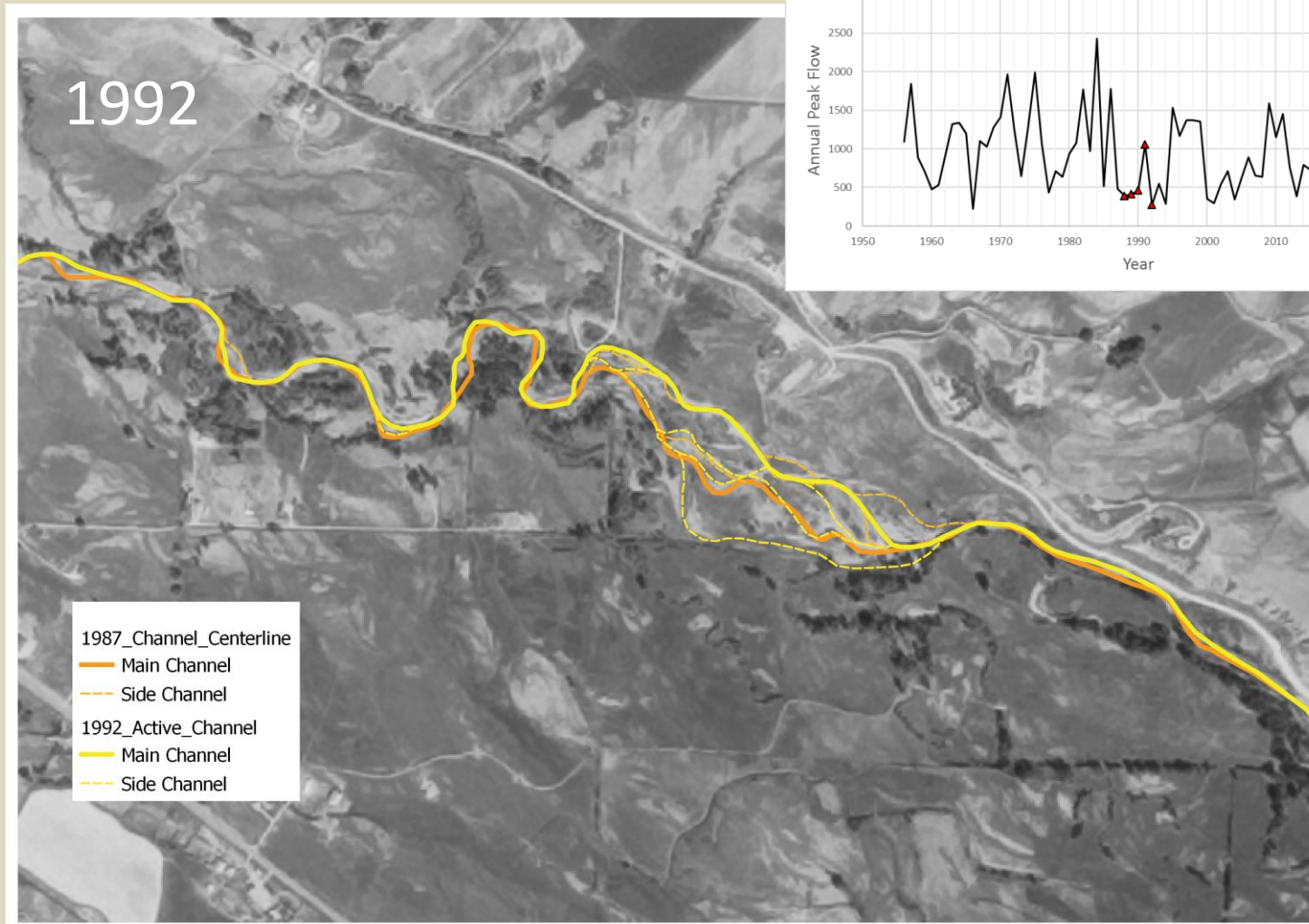


Lower Lemhi Reference Reach



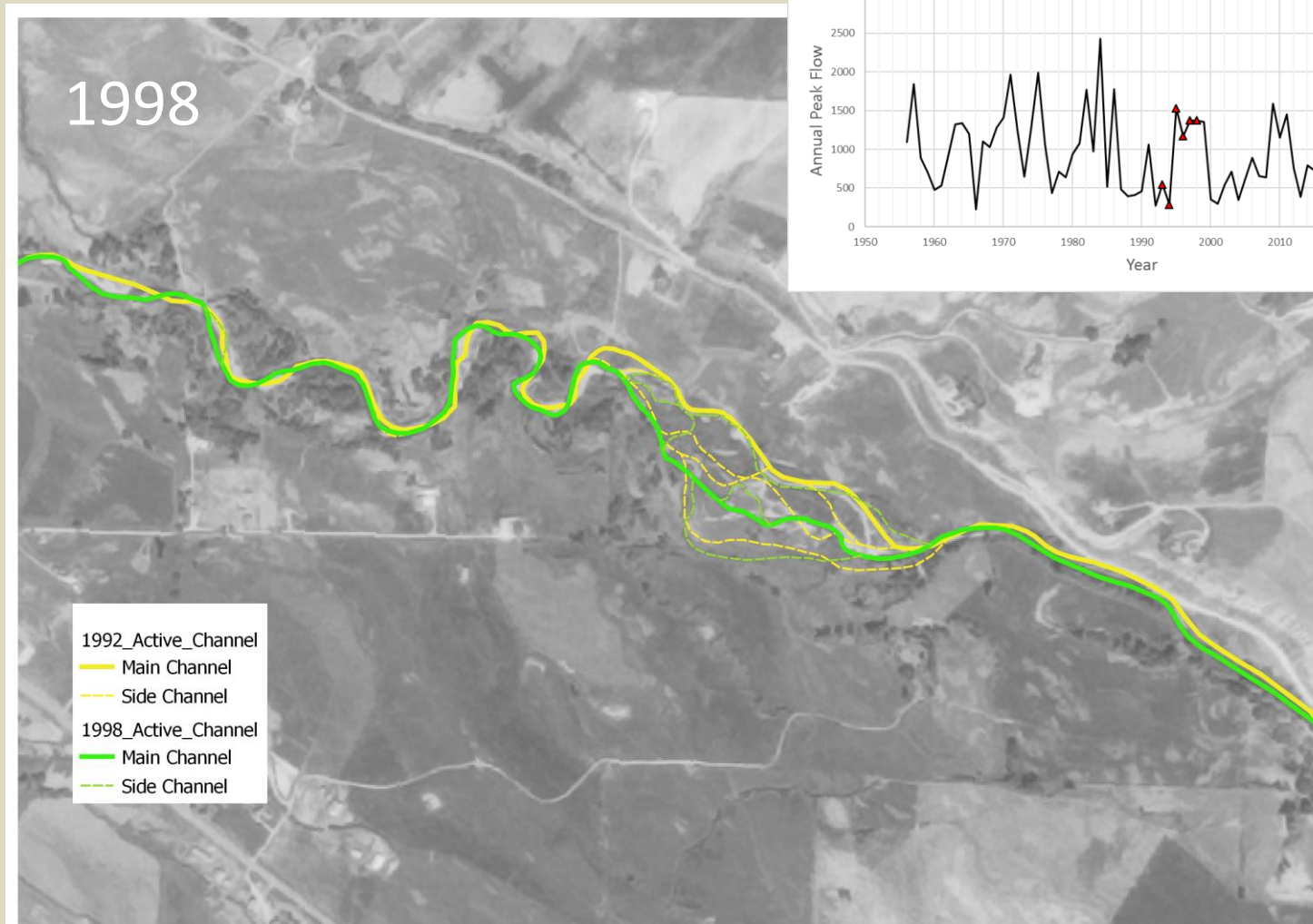
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Lower Lemhi Reference Reach



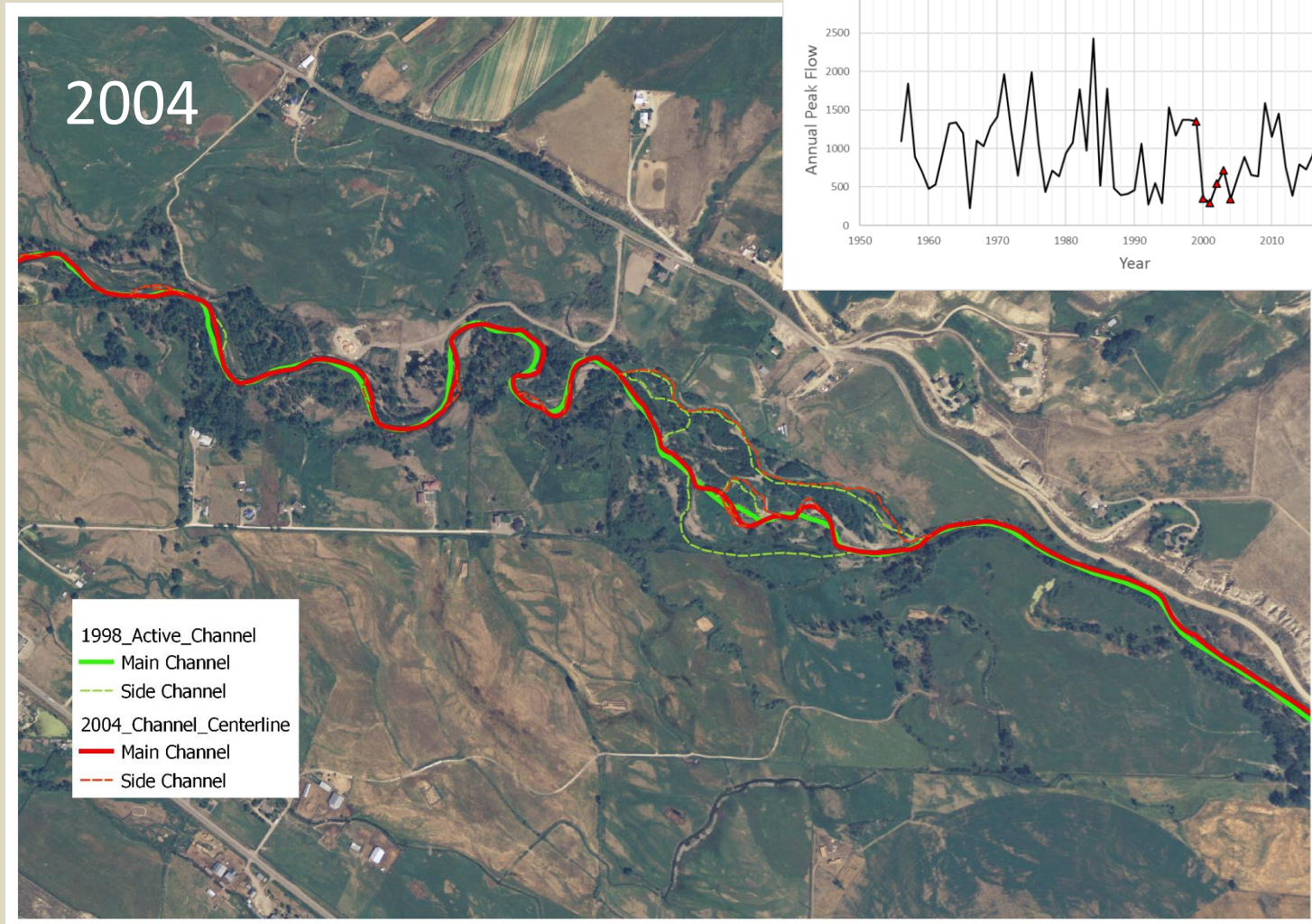
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Lower Lemhi Reference Reach



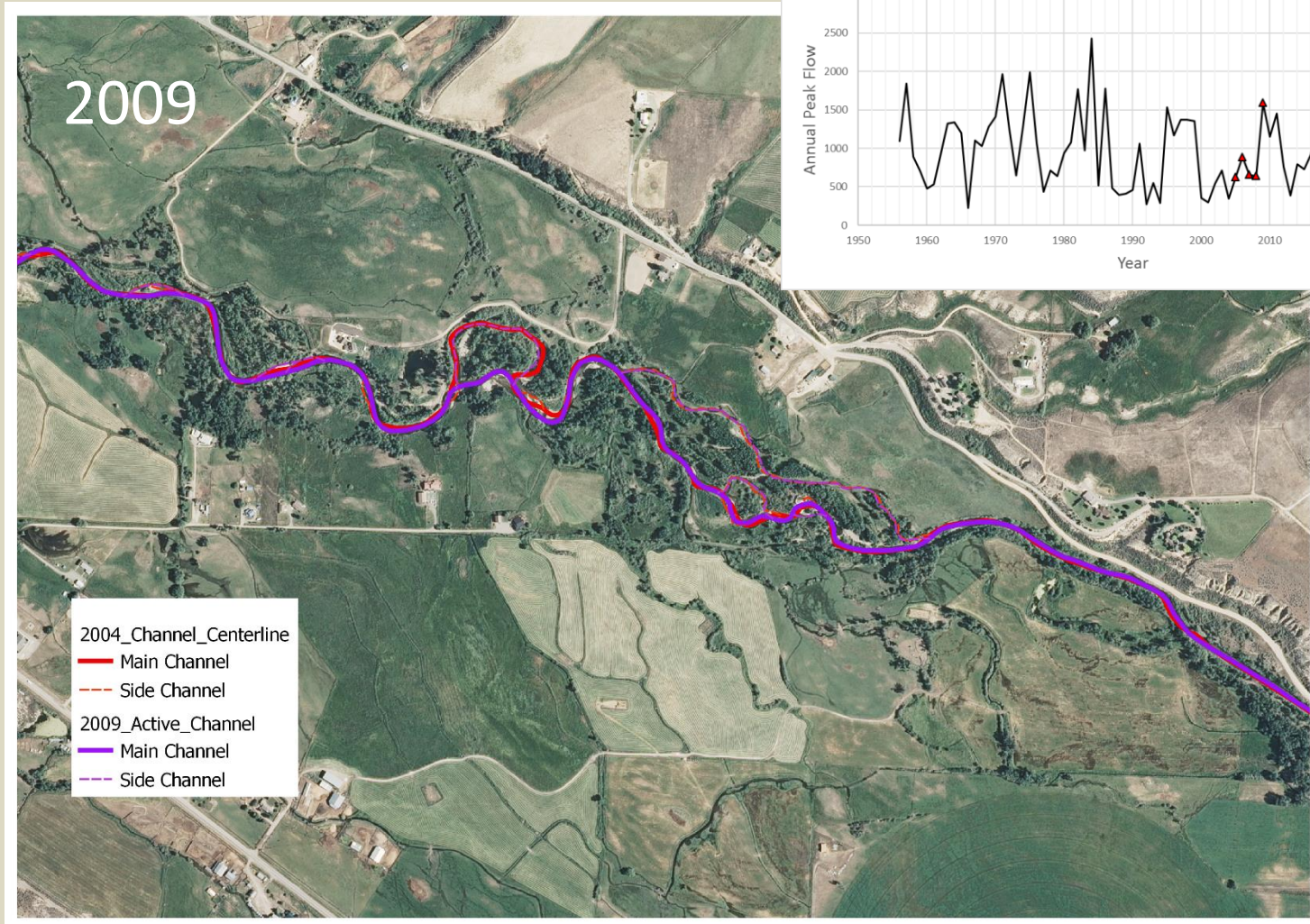
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Lower Lemhi Reference Reach



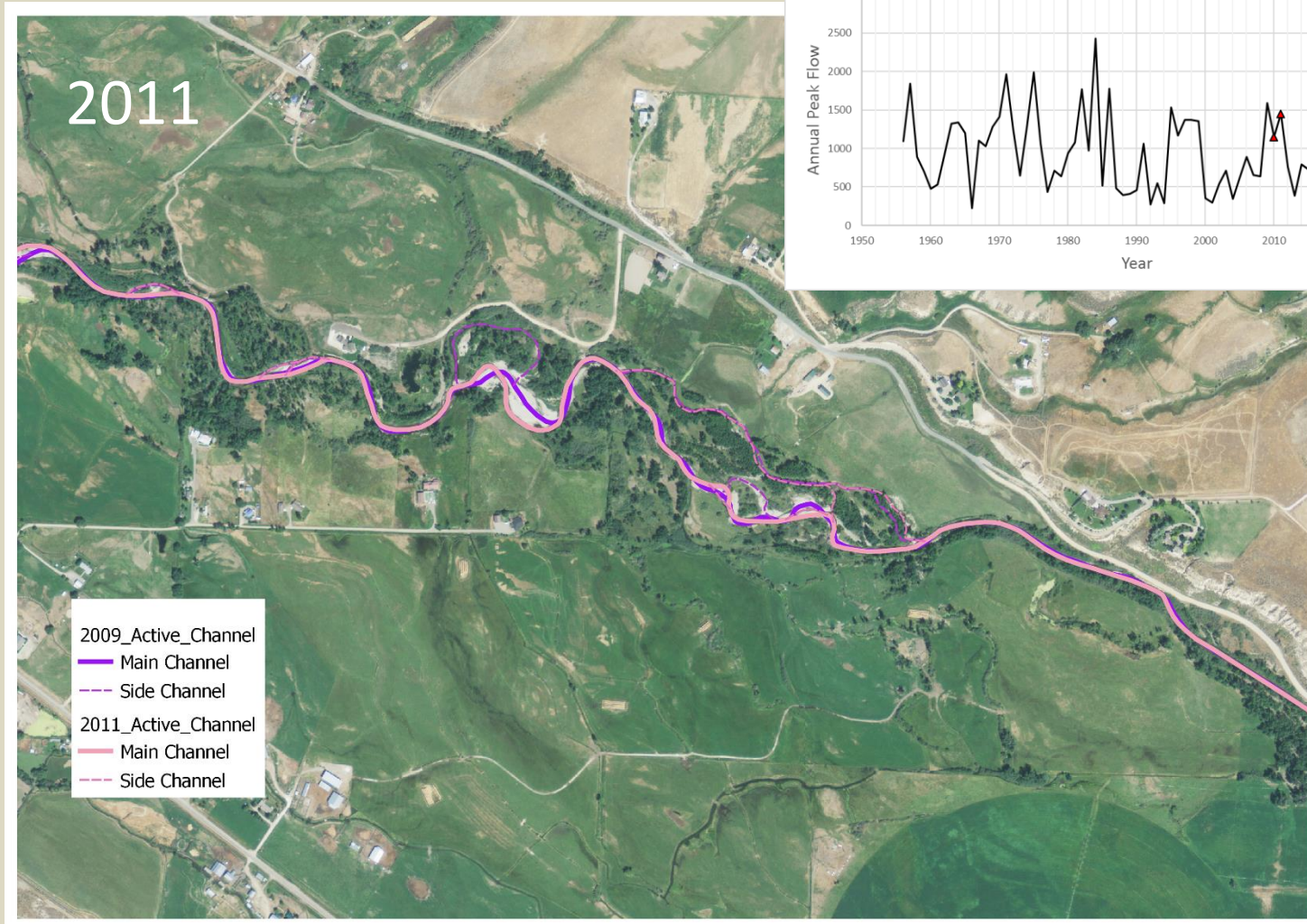
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Lower Lemhi Reference Reach



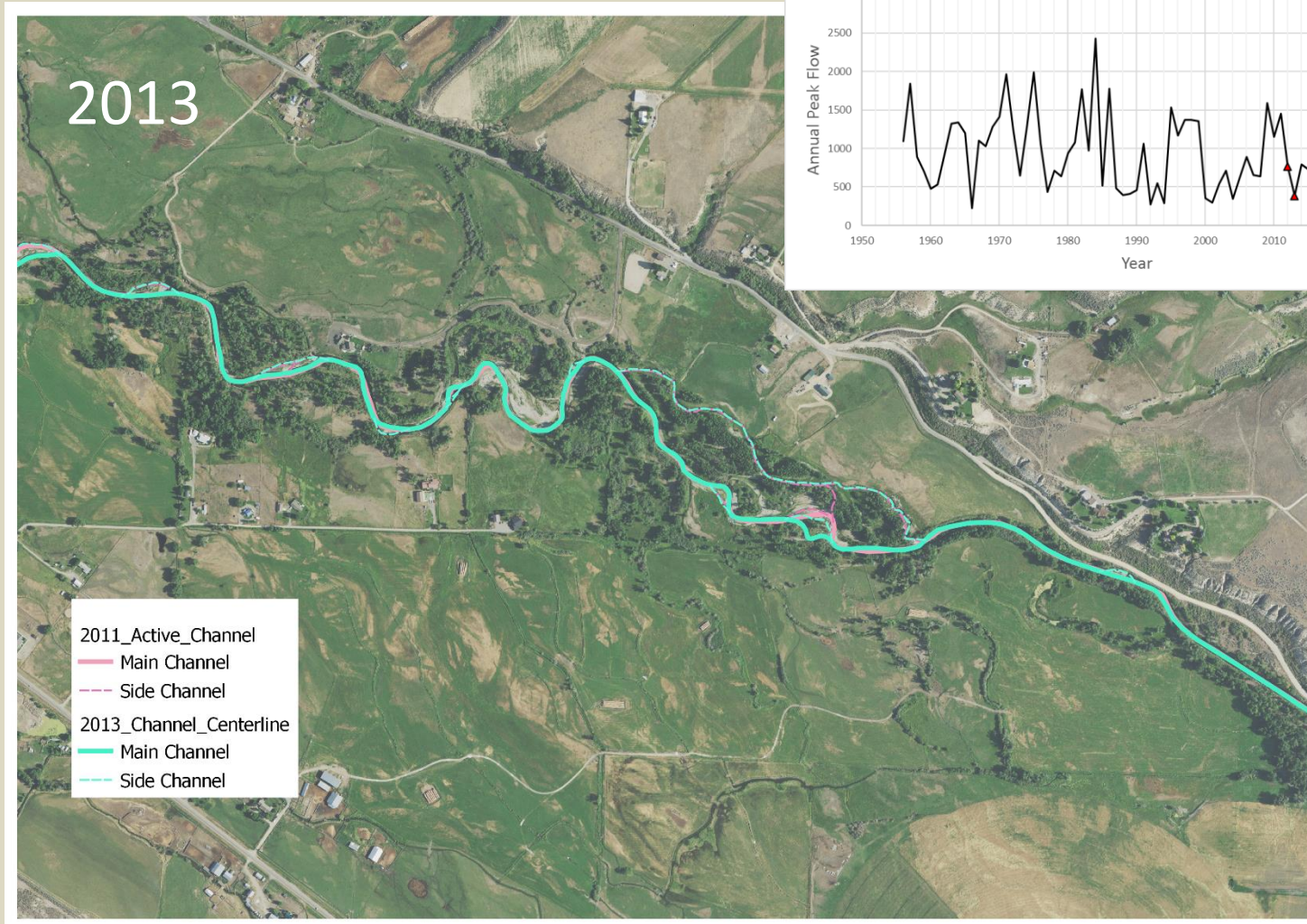
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Lower Lemhi Reference Reach



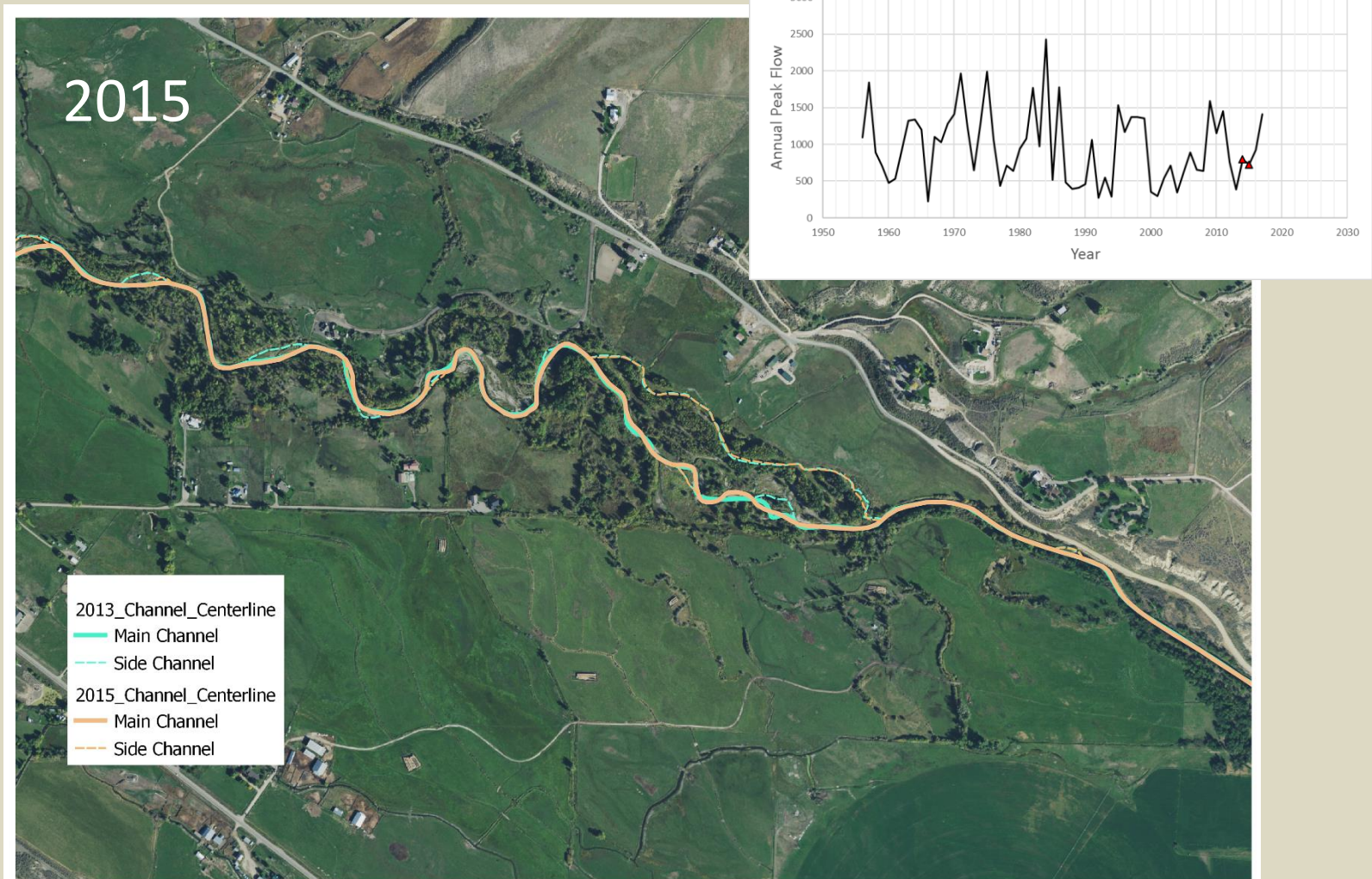
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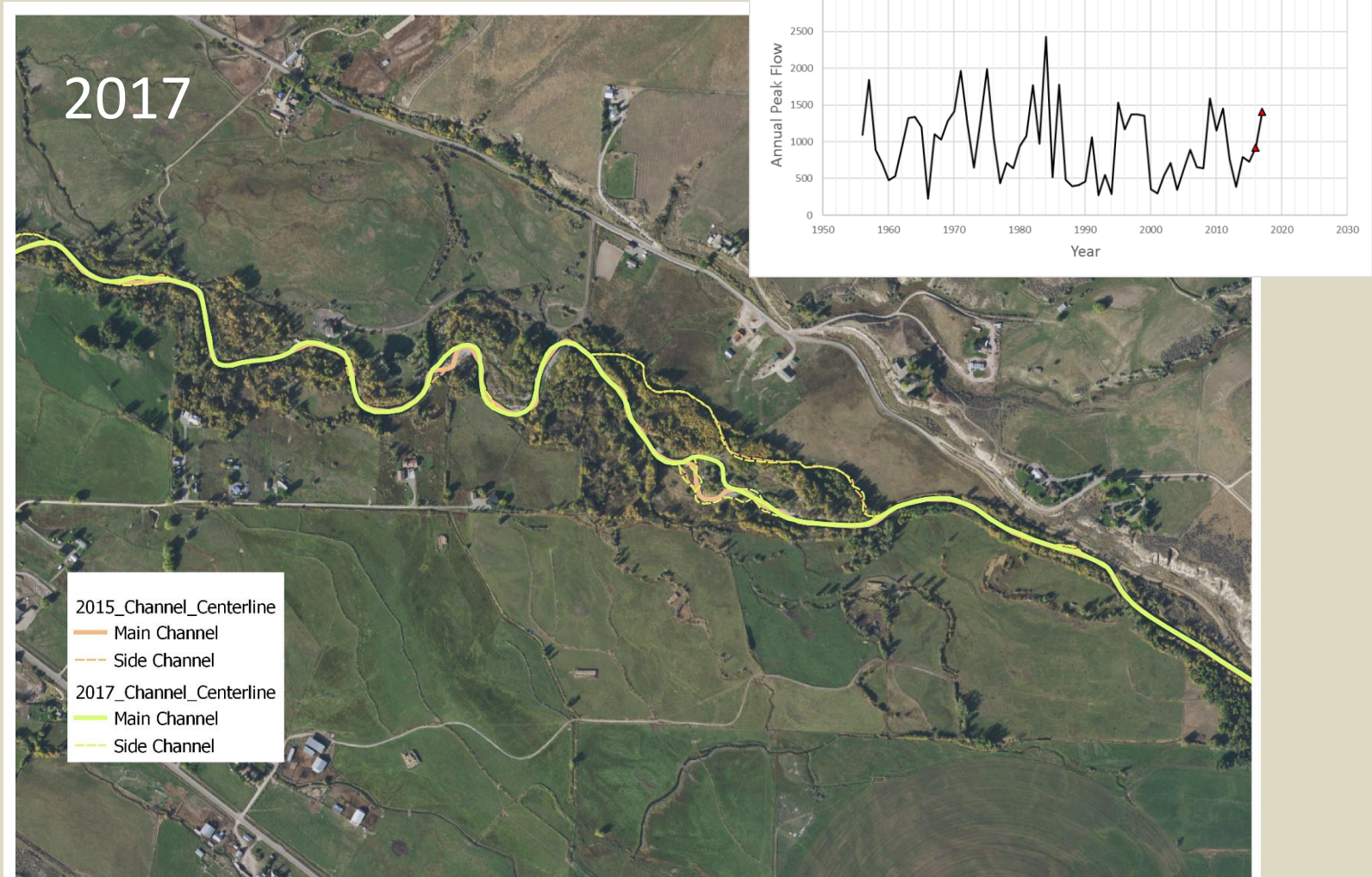
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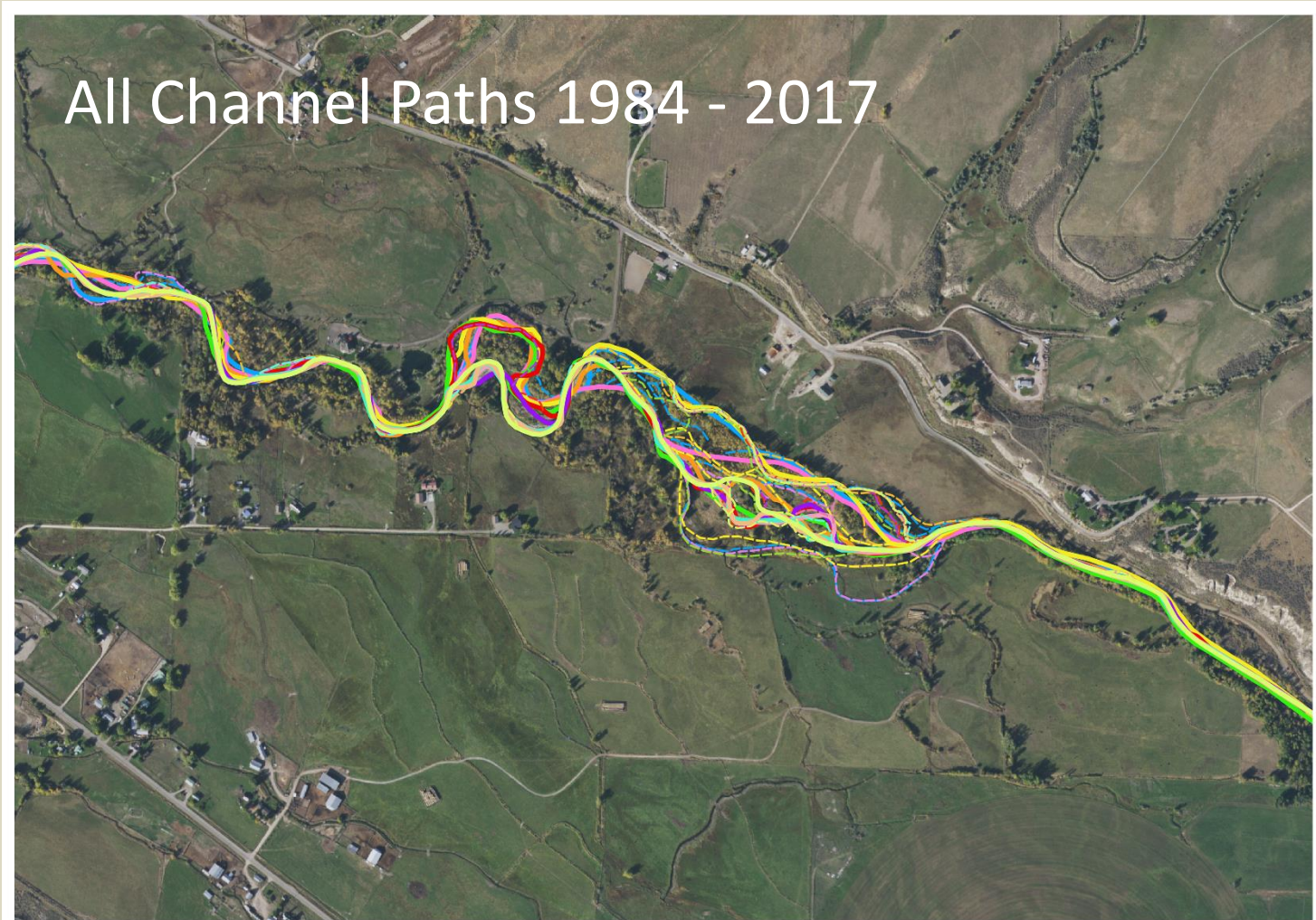
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Lower Lemhi Reference Reach



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Lower Lemhi Reference Reach



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Lower Lemhi Reference Reach

Example of Habitat Diversity



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Lower Lemhi Reference Reach



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Upper Salmon Basin
WATERSHED PROGRAM

Lower Lemhi Reference Reach



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Lower Lemhi Reference Reach



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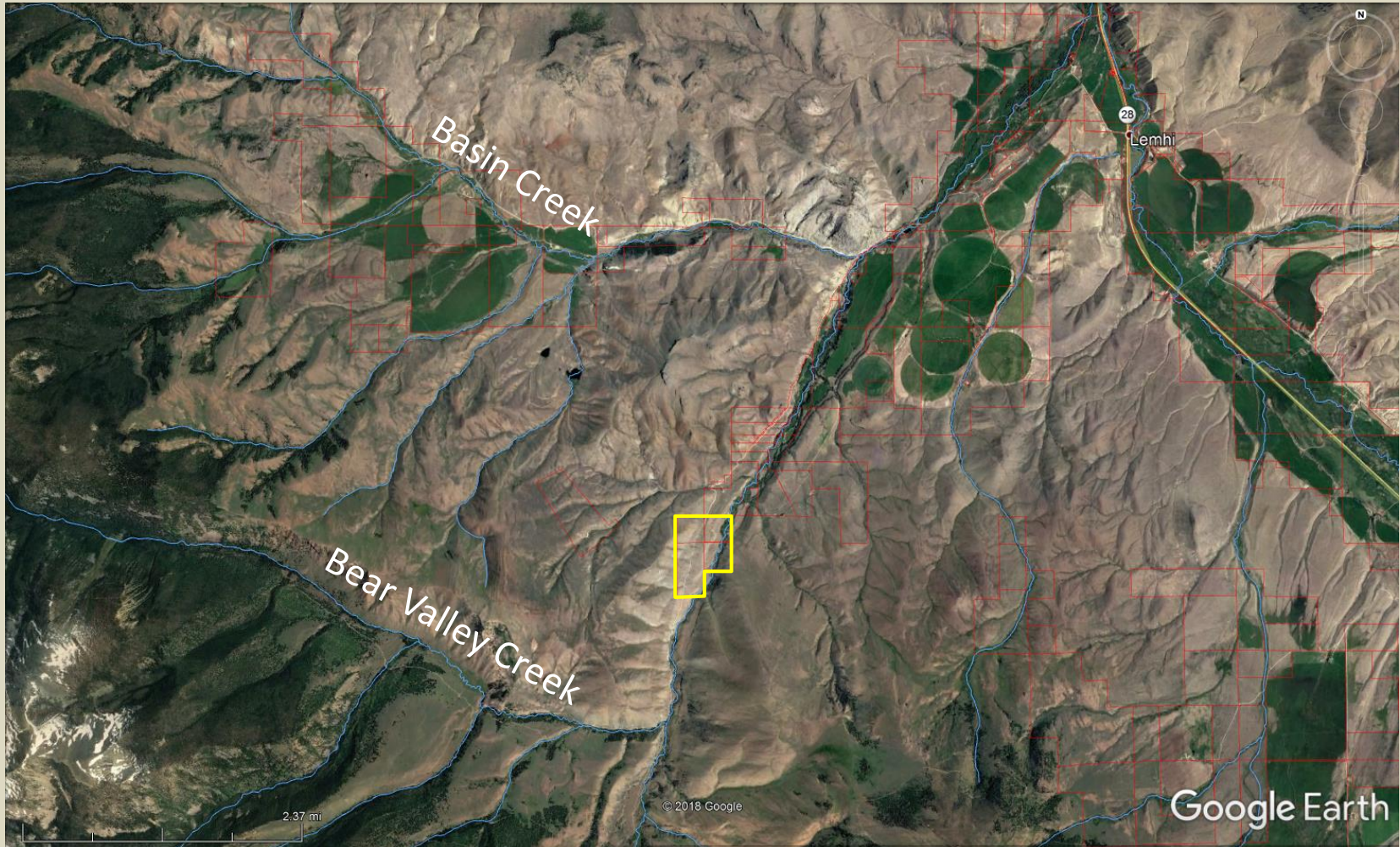


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Lower Lemhi Reference Reach

- Potential project that would:
 - 1) Conserve the good habitat that naturally exists in the Reference Reach
 - 2) Protect Private Property from further loss
 - 3) Create new habitat
 - 4) Still allow for dynamic river behavior

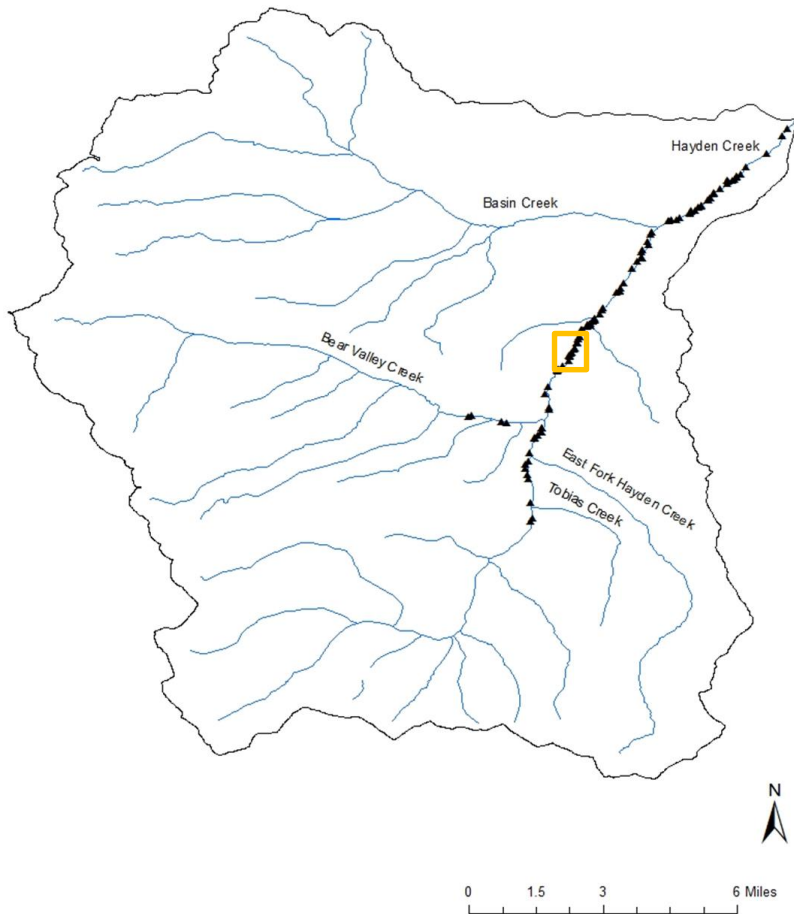
Hayden Creek Hermits



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Hayden Creek Hermits

Hayden Creek Chinook Salmon redds



- Largest trib to the Lemhi (~30-40% of flow)
- Listed as a priority in the Lemhi sub-basin by IRA
- Can account for nearly half of the total Chinook redds for an average year, but lacks rearing habitat
- Project goal to improve instream habitat and floodplain connectivity
- Land owner is cooperative
- Sponsor – Trout Unlimited

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Hayden Creek Hermits



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Hayden Creek Hermits



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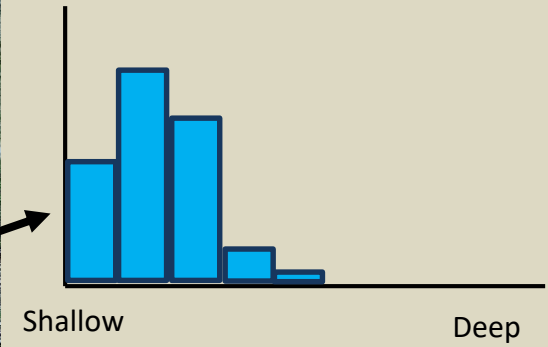


Upper Salmon Basin
WATERSHED PROGRAM

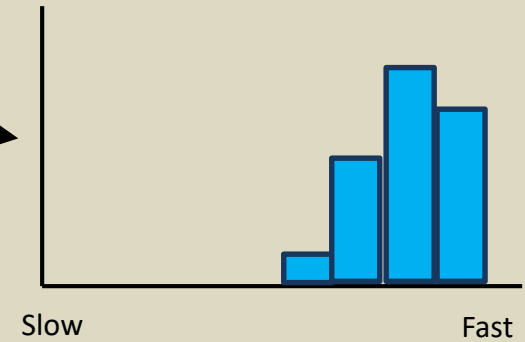
Hayden Creek Hermits



Depth



Speed

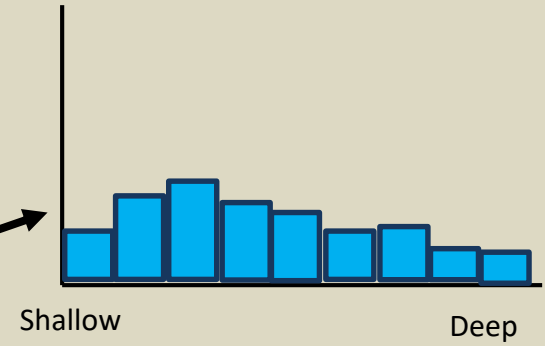


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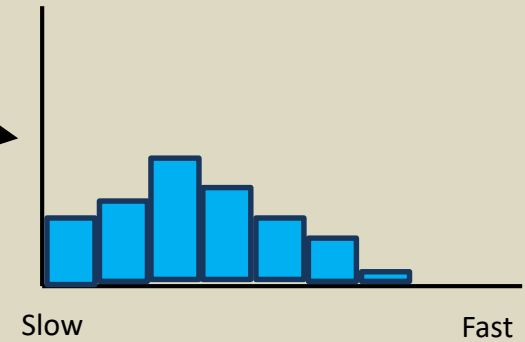
Hayden Creek Hermits



Depth



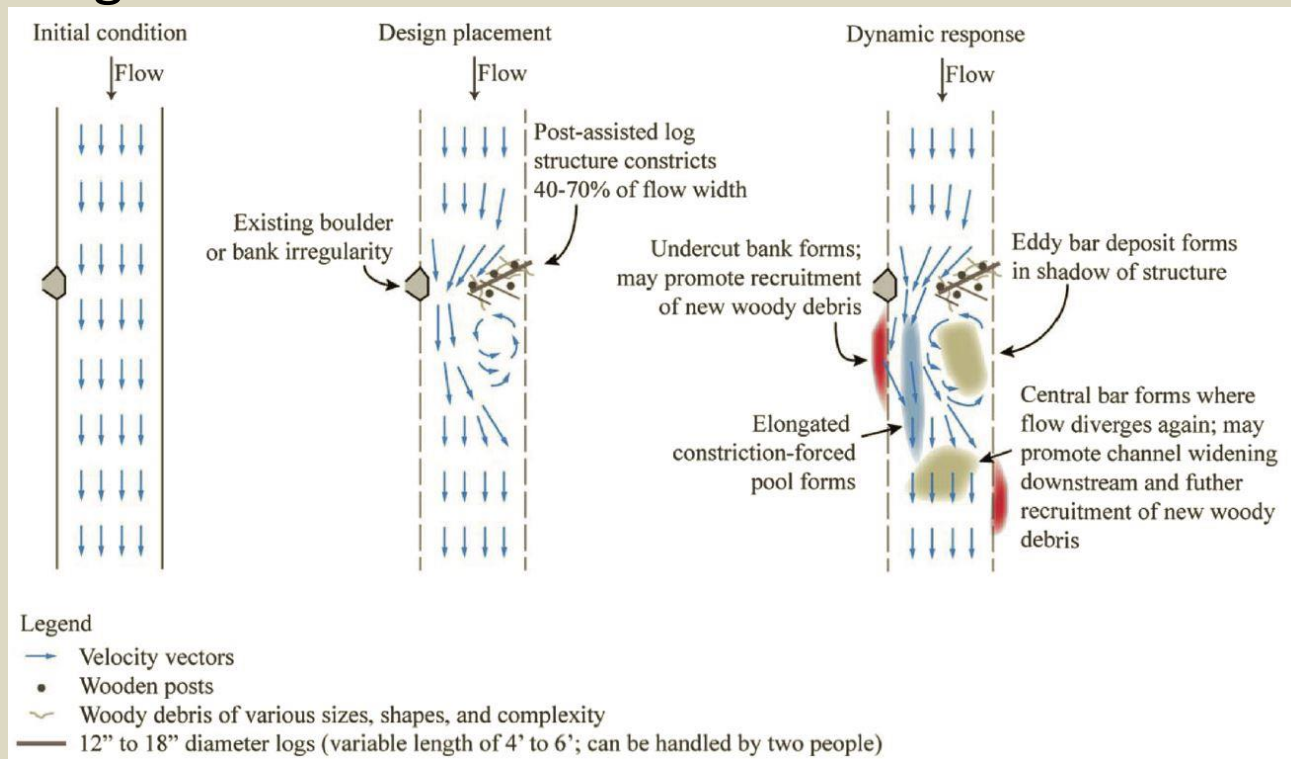
Speed



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Hayden Creek Hermits Project Design

- Increase instream habitat heterogeneity and floodplain inundation using wood structures (mimic natural woody debris inputs).
- 15% design finished - USBWP and Trout Unlimited



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Example of Complex Morphology (good habitat) on Hermits Property

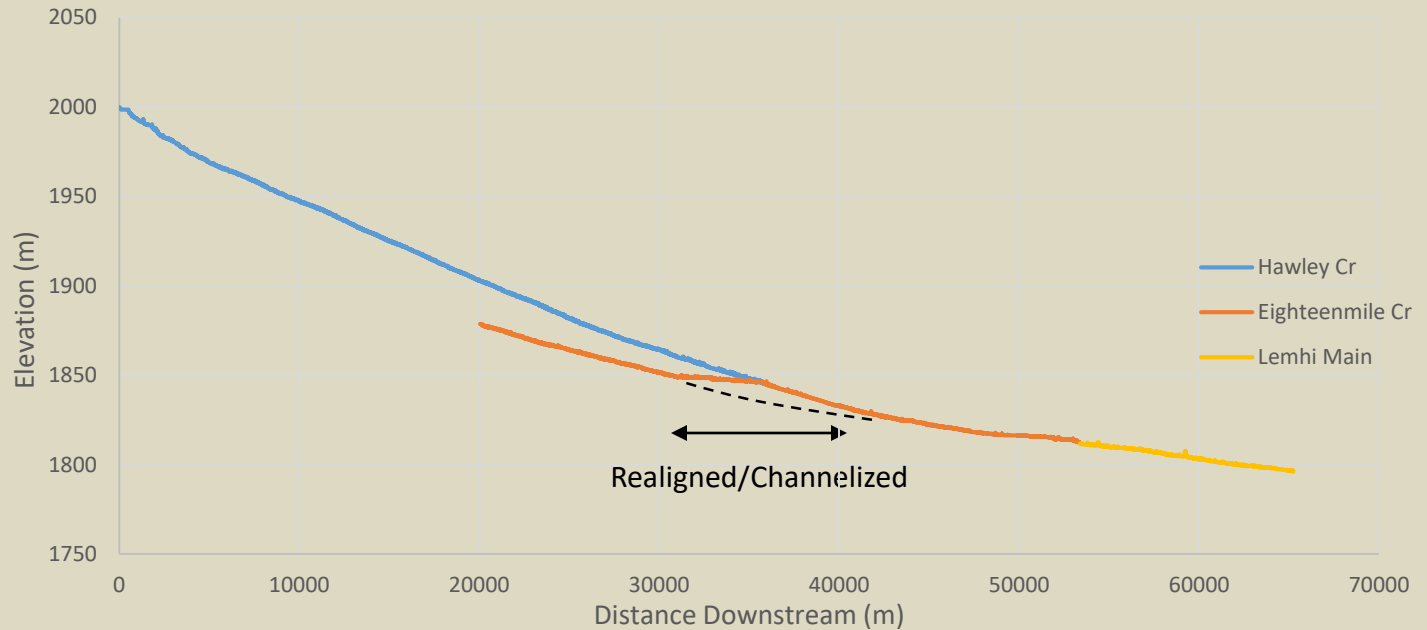


- Build up of large woody debris
- Active floodplain on both sides of channel
- High flow side channels
- Emergent gravel deposits
- Depth/velocity variations
- Good bank cover

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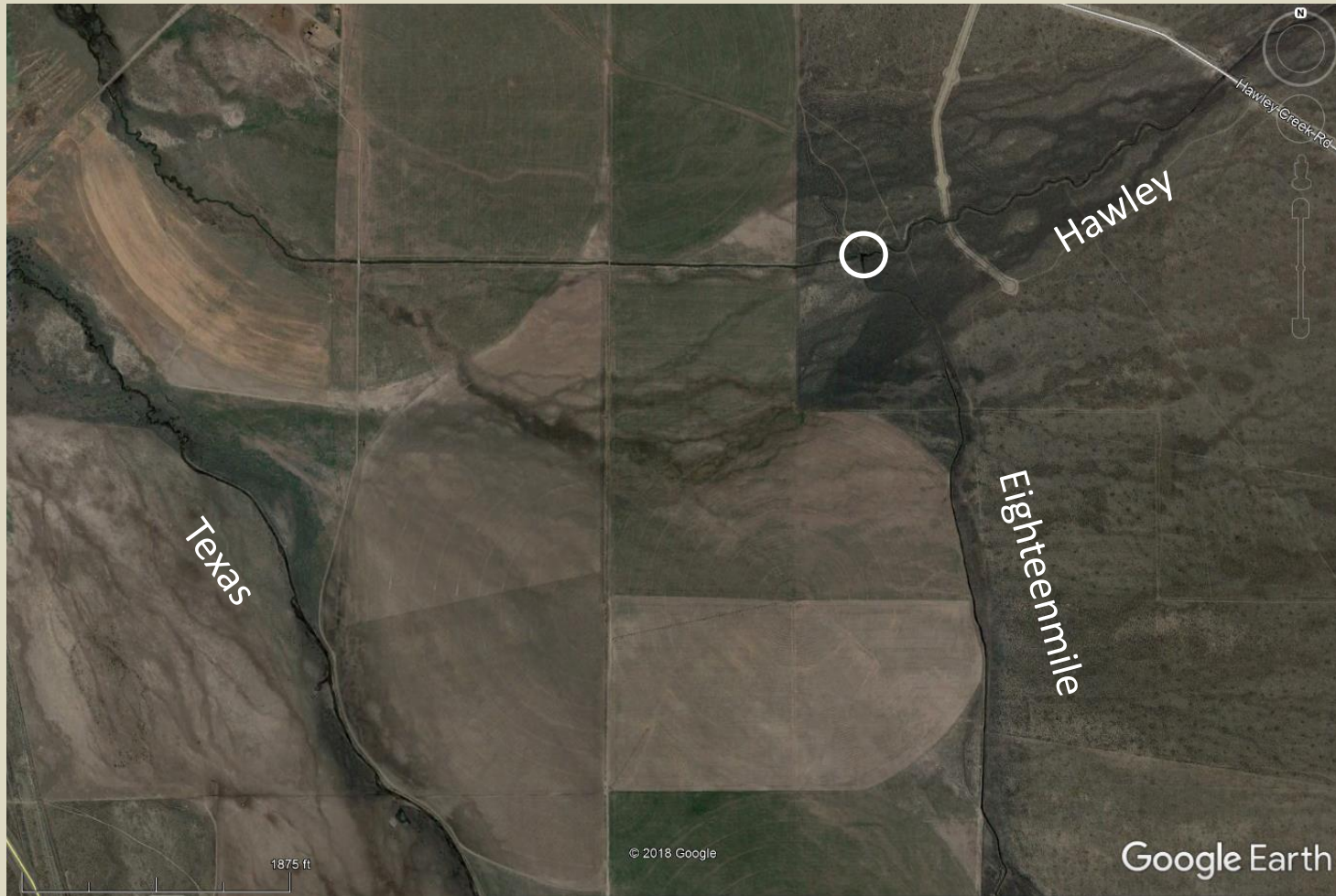
- Good opportunity to improve habitat on a stretch of Hayden Creek with a willing land owner.
- Could be a test-piece for Hayden Creek that opens the door for future projects on more degraded reaches.

Ellsworth Hawley-Eighteenmile Junction



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Ellsworth Hawley-Eighteenmile Junction

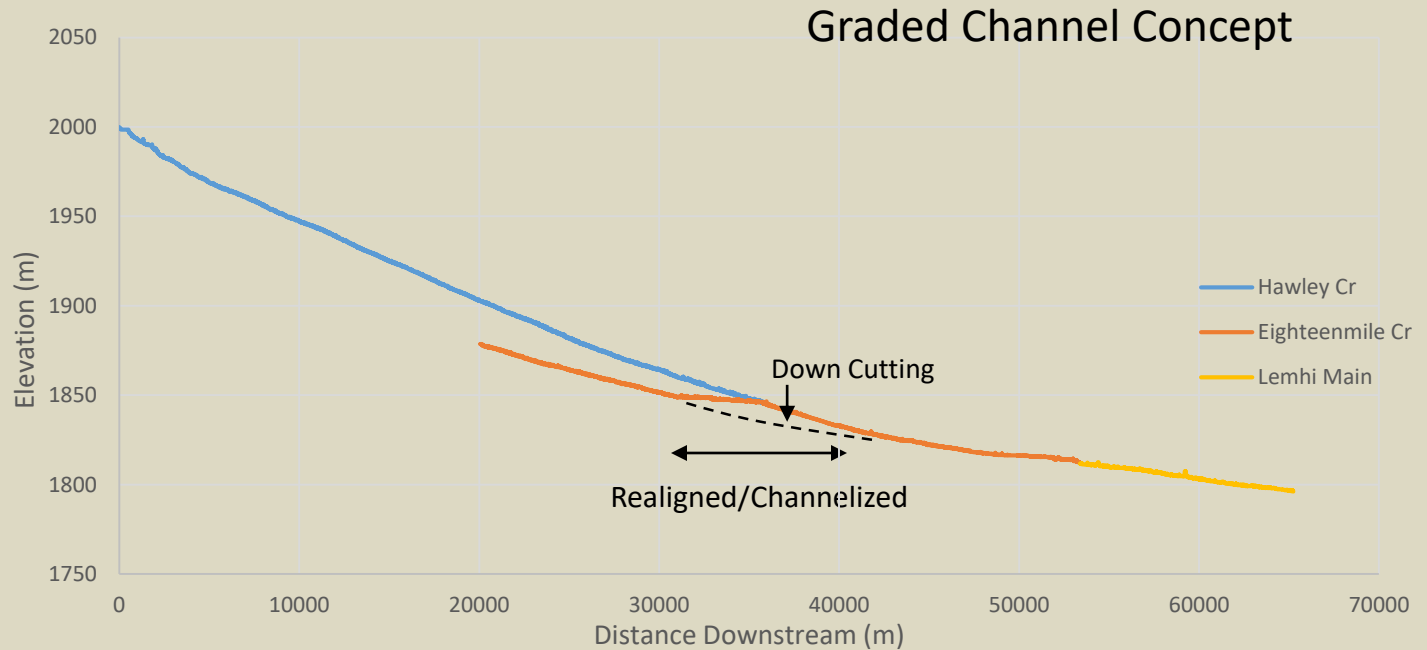


- 11 pivot crossings
- Minimal riparian growth
- Straightened Channels not aligned with natural gradient
- Creates water quality concerns with sediment and temperature



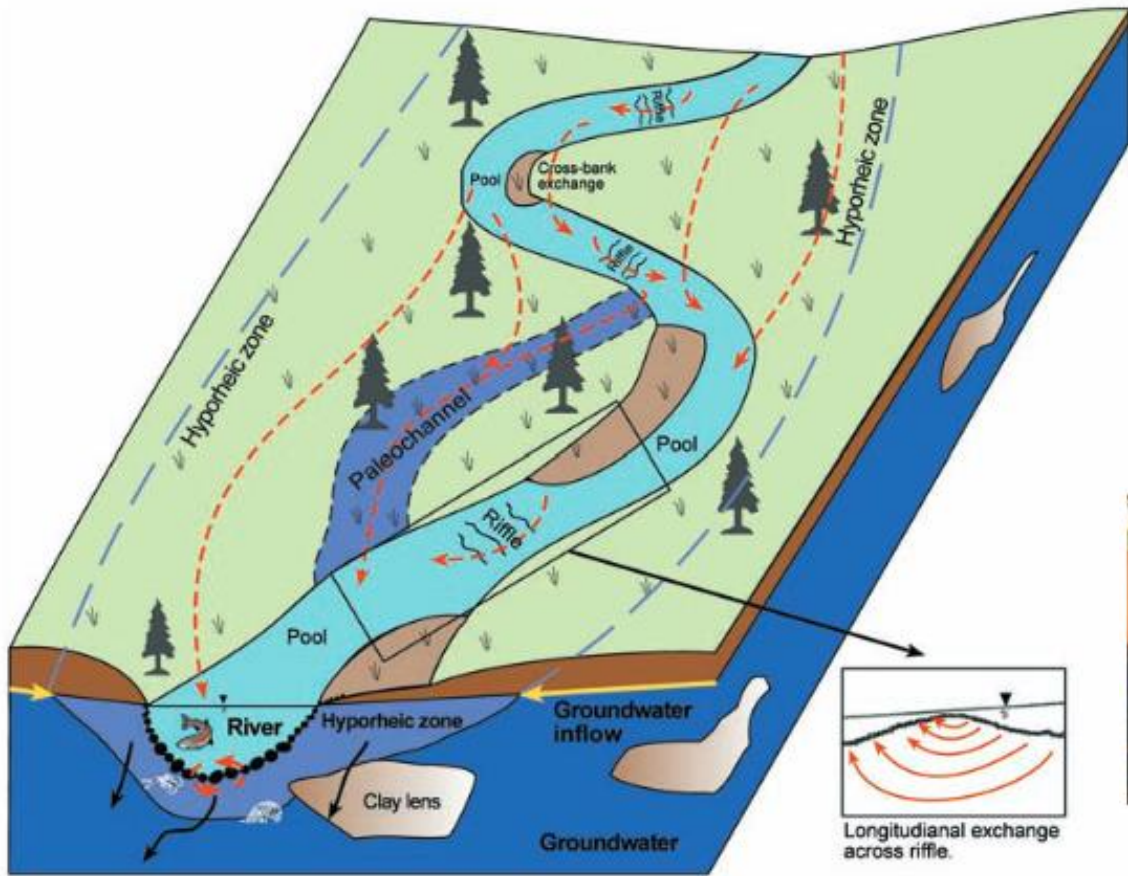
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Ellsworth Hawley-Eighteenmile Junction

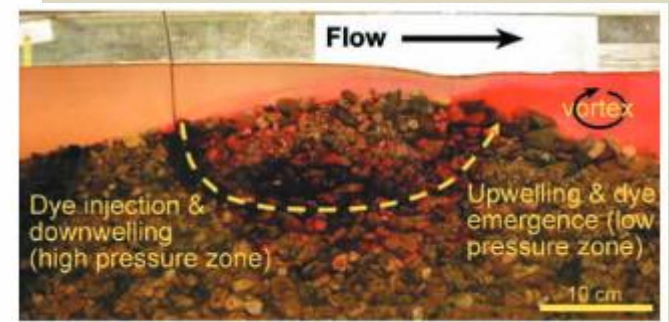


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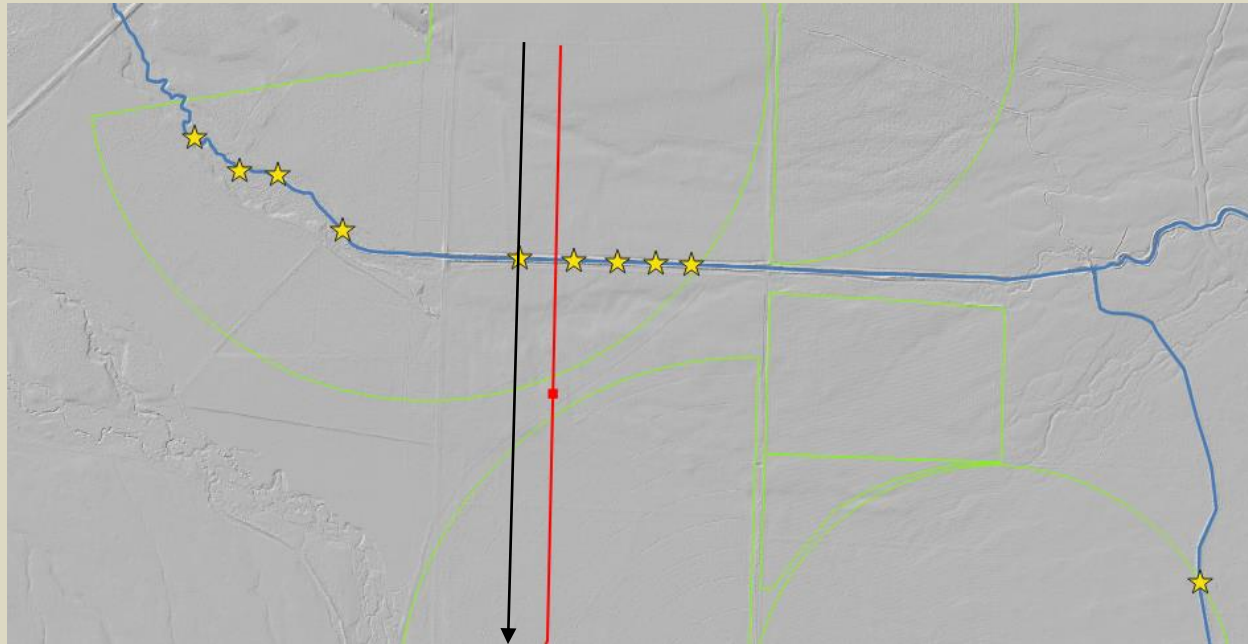
Ellsworth Hawley-Eighteenmile Junction



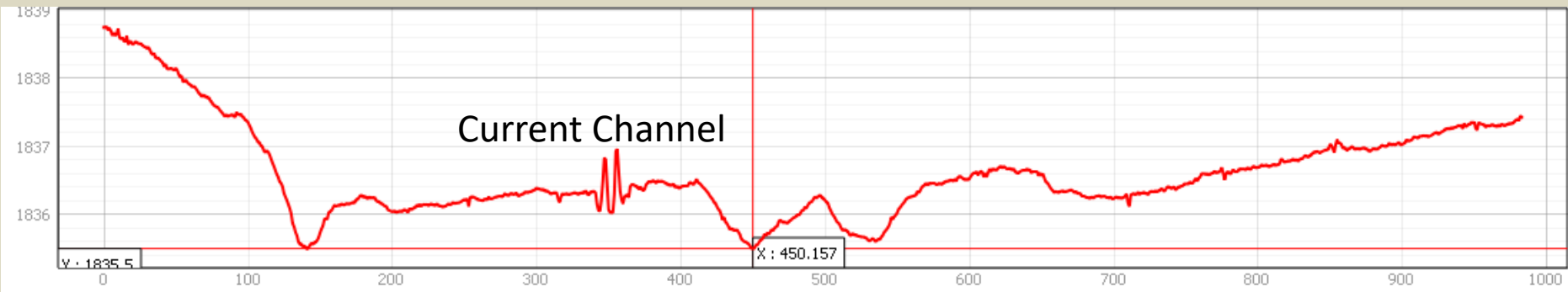
Temperature Benefits from Hyporheic Exchange



Ellsworth Hawley-Eighteenmile Junction



Natural Gradient and Icing



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Ellsworth Hawley-Eighteenmile Junction

- Design a more natural channel alignment that:
 - 1) Improves sediment and thermal conditions
 - 2) Benefits Carl Ellsworth's operation (no loss of irrigated land, reduce pivot crossings, aid with icing issues)
 - 3) Can include riparian vegetation
 - 4) Provides better habitat