Meeting Summary
GRAVEL AUGMENTATION WORKGROUP
TRRP Office, Weaverville, CA
November 7, 2013

**Thursday November 7, 1:00 PM**

**Participants**

Core members: Robert Franklin* (Hoopa Valley Tribe); Dave Gaeuman (Reclamation); Andreas Krause (Yurok Tribe); Conor Shea (USFWS); Mark Smelser* (Ca. DFW); Wes Smith (NOAA Affiliate).

Other participants: Bill Brock* (USFS); Charlie Chamberlain*, Ernie Clarke, Damon Goodman and Joe Polos* (USFWS); Brandt Gutermuth and Robin Schrock (Reclamation); Tim Hayden and Aaron Martin (Yurok Tribe); Scott Kennedy* (DWR).

* participated via Webex
Note takers: Tim Hayden / Ernie Clarke

**Summary of New Actions Items:**

1. Brandt to develop maps for potential 2014 coarse sediment placements locations.
2. Rod Wittler to send out 2014 flow alternatives under consideration.
3. Aaron and others to review existing habitat information for potential 2014 coarse sediment locations.

**Summary of Decisions:**

- Robert Franklin was identified as the workgroup coordinator for fiscal year 2014.
- 2014 coarse sediment augmentation alternatives will need to be documented by February. Documentation will include: project description; justification; predicted channel response; supporting analysis; evaluation plan; uncertainties / potential risks.
- Workgroup will provide water year specific recommendations to the TMC in March.
- Any gravel placement for supply (versus structural) purposes (inclusive of placement channel rehabilitation sites) will be evaluated by the gravel augmentation workgroup.

1. **Introductions, Purpose, Membership, and Agenda Overview**

**Workgroup purpose:** Ernie recited the proposed workgroup purpose circulated with the draft agenda (attached): *To develop and evaluate gravel augmentation protocols to restore the processes and attributes of a healthy alluvial river system in order to restore anadromous fish populations.* Workgroup members accepted the proposed statement.

**Membership:** Based on September 2014 request from Robin, each partner organization identified gravel augmentation workgroup members. The following people were identified: Robert Franklin and Sean Ledwin (alternate) for the Hoopa Valley Tribe; Andreas Krause and Aaron Martin (alternate) for the Yurok Tribe; Conor Shea (USFWS); Dave Gaeuman (Reclamation); Mark Smelser, Andrew Jensen (alternate) and Scott Kennedy (alternate) (California Resources Agency); Wes Smith (NOAA Affiliate). Multi-disciplinary membership is encouraged. Technical representation from Partners is not limited. However, organizations with multiple representatives are expected resolve their technical positions outside the workgroup forum for the efficiency of the group.

**Agenda Review:** Ernie reviewed the draft agenda (attached). Group agreed to move Andreas' "Background" presentation to 1:15 since it addresses primary workgroup deliverables.

2. **Background**

Andreas gave a presentation (attached) covering: coarse sediment direction from the ROD, objectives from the IAP, applicable reports, and potential issues to address in four categories (adaptive management, decision making, technical, and implementation).

3. **Issue Identification**

- Permit renewal - by June 2014 Brandt needs information to support the development of a draft NEPA-CEQA document for the next 5 year permit. The document will be circulated for public comment during the fall of 2014. Slide 23 of Andreas attached presentation list information needed to support permit renewal.
- Group recognized the need to integrate physical and biological objectives in developing gravel augmentation recommendations.
- Robert Franklin spoke to need for development of long-range sediment management strategy in parallel with next 5-year permit.

4. **2014 Recommendations**

- Group discussed potential sites for 2014 augmentation (see slides 21-22 of the attached presentation). Brandt will clarify the permitted locations.
- Discussion of tasks and analyses to inform 2014 recommendations. Leads will update the group on these at the December 3 meeting.
  - Dave described how he planned to use transport at Douglas City as an index to develop recommendations for upstream reaches. He is also planning to make reach-specific recommendations based on local conditions.
  - Request Fish workgroup (habitat team and others) to review available data-sets to guide 2014 placement. By December the Fish Workgroup will provide to Gravel Augmentation Workgroup biological considerations associated with the potential augmentation sites. In future the Fisheries Workgroup will develop quantitate biological criteria to guide gravel augmentation.
- Next steps:
  - December – workgroup to convene and discuss information developed in support of 2014 augmentation recommendations, timeline for development of Long-Range Sediment Management Plan; and content of December presentations to TMC and TAMWG.
  - February – documentation for 2014 coarse sediment augmentation alternatives due.
  - March - Water year specific recommendations for gravel augmentation shared with TMC.

5. **Identify Coordinator**

Workgroup members were asked if they were available to coordinate the group. Robert Franklin volunteered for the roll and was supported by his fellow members.

**Adjourn at 4:00 PM**

# Gravel Augmentation Workgroup

# Meeting Agenda

**Thursday, Nov. 7th, 2013**

**1:00 pm to 4:30pm**

**TRRP Large Conf. Room or Teleconference - WebEx**

| | |
|---|---|
| **Coordinator/Facilitator:** | **Ernie Clarke (interim)** |
| **Desired Outcomes:** | 1. Welcome workgroup members.<br>2. Develop a common understanding of the workgroup's purpose and membership.<br>3. Identify a workgroup coordinator.<br>4. Discuss information needed to support gravel augmentation.<br>5. Discuss the development of 2014 gravel augmentation recommendations. |
| **Please be familiar with:** | 1. M&T (2007) Coarse sediment management plan, Lewiston to Douglas City, Trinity River, CA. http://odp.trrp.net/Data/Documents/Details.aspx?document=255<br>2. Gaeuman D, Krause A (2013) Assessment of pool depth changes in the Trinity River between Lewiston Dam and the North Fork Trinity River. Technical Report: TR-TRRP-2013-1, U.S. Bureau of Reclamation, Trinity River Restoration Program, Weaverville, CA. Gaeuman (2013) Assessment of pool depth changes.pdf<br>3. Gaeuman, D (In preparation) Draft 2012 Sediment Budget Update, Trinity River, Lewiston Dam to Douglas City, California |

## Agenda Items

**WebEx Call-in/Log-in Details**

Call-in toll number: 1-408-792-6300

Meeting Number: 573 557 594

Meeting Password: Abc123!

Weblink: https://trrp.webex.com/trrp/j.php?ED=245254882&UID=1462193832&PW=NZjIxOTRmZWU2&RT=MiM0

| Time | Topic | Presenter |
|---|---|---|
| 1:00 | Introductions, Purpose, Membership, and Agenda Overview | Clarke |
| 1:15 | Discuss Primary Deliverables | Clarke |
| 1:30 | Background | Krause |
| 2:00 | Issue Identification<br>*Discussion of tasks and analyses needed to inform gravel augmentation in general.* | Krause / Group |
| 3:00 | 2014 Recommendations<br>*Discussion of tasks and analyses planned to inform 2014 gravel augmentation recommendations.* | Krause / Group |
| 4:00 | Identify Coordinator | Clarke |
| 4:15 | Next Steps | |
| 4:30 | Adjourn | |

*Note: There will be a December 3 meeting to review technical recommendations for 2014.*

*DRAFT WORKGROUP PURPOSE STATEMENT:*

*To develop and evaluate gravel augmentation protocols to restore the processes and attributes of a healthy alluvial river system in order to restore anadromous fish populations.*

# Gravel Augmentation Status

Andreas Krause
Gravel Augmentation Workgroup
11/7/13

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## ROD

- directs implementation of a coarse sediment augmentation program below Lewiston Dam to balance the coarse sediment transported during high flow releases

2

## Linked Decisions

- Flow Releases
- Gravel Augmentation

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## IAP Objectives

| Level 1 Objectives | Level 2 Objectives | Level 3 Objectives |
|---|---|---|
| 1. Create and maintain spatially complex channel morphology | 1.1. Increase physical habitat diversity and availability *(to achieve Fish Habitat objective 2.1, Riparian objectives 5.1 & 5.2, and Wildlife objectives 6.4.1 & 6.5.1)* | 1.1.1.Increase the size, frequency and topographic relief of bar/pool sequences |
| | | 1.1.2 Increase channel/thalweg sinuosity |
| | | 1.1.3 Increase geomorphic unit and substrate patch diversity |
| | 1.2 Increase coarse sediment transport and channel dynamics | 1.2.1 Increase and maintain target coarse sediment transport rates |
| | | 1.2.2 Frequently exceed channel migration, bed mobilization, and bed scour thresholds |
| | | 1.2.3. Encourage bed-level fluctuations on annual to multi-year time scales |
| | | 1.2.4 Route coarse sediment through all reaches |
| | 1.3 Increase and maintain coarse sediment storage | 1.3.1 Increase bars, side-channels, alcoves, and other complex alluvial features |
| | 1.4 Reduce fine sediment storage in the mainstem Trinity River | 1.4.1 Transport fine sediment through mainstem at a rate greater than tributary input |
| | | 1.4.2 Reduce fine sediment supply from tributary watersheds |
| | | 1.4.3 Encourage fine sediment deposition on floodplains |

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## Management Needs

- Site specific annual recommendations
  - 2014
  - Long-term gravel augmentation plan
  - Renew gravel augmentation permit
  - Science work plan to support adaptive management of augmentation

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## Existing Recs

- TRFES
  - 0 to 67,000 CY pending WY (Avg. 10,300 CY)
  - Based on very little data
- CSMP 2007
  - Rec using average annual placement volumes
  - Float trip ID several potential short term placement locations
- Gaeuman 2008
  - Utilized numerical modeling
  - 6,700 CY average annual
- Viparelli 2011
  - No recommendations made
  - Evaluated geomorphic response to 4 different augmentation scenarios using numerical modeling

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## Past Process to Develop Annual Recs

- Ad hoc
- Poorly integrated
- Poorly documented
- Little analysis
- Little adaptive management

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## Need for better plan / process

- Internal disagreements
- External disagreements
- Lack of support

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## TMC Motion

(April 2013 conference call)

- Continue efforts to refine the long-term coarse sediment management plan to be presented at the December TMC meeting

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## SAB Recommendation

(2013 workplan review)

- Implement adaptive management for gravel augmentation
  - Update the conceptual model for gravel routing
    - key element to build a long-term operational plan for flow and gravel augmentation
  - Long-term plan must be built on specific, testable estimates of how gravel moves through the system
  - Revamp the entire physical science workplan to support development and evaluation of gravel augmentation actions

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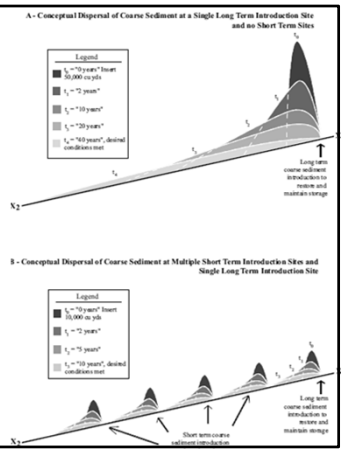
## Conceptual gravel routing models from 2007 CSMP

- Do not satisfy SAB recommendation




## Status

- Physical Workgroup met twice (June and July)
- Issues larger and more complex than originally anticipated
- Subgroup formed to help guide workgroup efforts
- Sediment budget update out for review
- Additional technical analysis underway
- Fish WG engaged to help ID reaches that need gravel
- High flow recs to be included in 2014 flow scheduling briefing document
- New Gravel Augmentation WG formed

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Emerging issues to be addressed

## Adaptive Management

- Refine objectives
  - Quantifiable, measurable, predictable, set targets, responsive to action
- Refine conceptual model(s) for gravel routing
- Include predictions
  - Quantifiable, measurable
- Revise physical science workplan
  - Monitoring / Evaluation

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Emerging issues to be addressed

## Decision Making

- Clarify decision making process and linked decisions
- Improve documentation
  - Recommendations / Decisions
  - Evaluations
  - Permitting
- Well suited to DSS

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Emerging issues to be addressed

## Technical

- Fully identify issues to be addressed
- Identify approach to address issues
  - Utilize structured decision making
- Develop augmentation recommendations
  - 2014
  - Long-term

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Emerging issues to be addressed

## Implementation

- Channel rehab largely done in Lewiston
  - Gravel augmentation is now a stand alone action
- 2014 implementation covered under existing permit
- New 5-year permit needed
  - Project description due June 2014

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## Next Steps

- Fully identify issues to be addressed
- Address issues
  - Utilize structured decision making
  - Conduct analyses as needed
- Develop technical recommendations
  - 2014 augmentation
  - Long-term augmentation plan
  - Documentation i.e. proposal template
- Revise / integrate physical science workplan
- Renew permit

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## Subgroup Rec Next Steps

- Go to spreadsheet

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## Timeline

- Workgroup to ID specific tasks and timelines
- Dec. 2013
  - GAWG reviews DRAFT 2014 gravel augmentation recommendations
  - TAMWG/TMC update
- Feb. 2014
  - 2014 recommendations to TMC
  - Date based on flow scheduling timeline
- June 2014
  - Submit project description for permit renewal process

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## Elements of Augmentation Proposals (site specific)

- Project description
- Purpose and need
- Predicted channel response
- Supporting analysis
- Evaluation plan
- Uncertainties / potential risks

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## 2014 Permitted Long-term Augmentation Locations

- Lewiston Hatchery
- Lewiston Weir
- Lewiston Cableway
- Sawmill Point
- Lowden Ranch

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## Additional 2014 Permit Locations

- ESL's constructed in the last 5 years
  - Bucktail
  - Sawmill
  - Lowden Ranch
  - Reading Creek
  - Trinity House gulch
  - Wheel Gulch
  - Upper Junction City
  - Lower Steiner Flat
  - Douglas City
  - Lorenz Gulch

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## Project Description for Permit Renewal

- rationale (general and site specific)
- location
- volume
- frequency
- grain size
- timing
- placement method
  - potential to add organic matter
- cleanliness
- sediment source and haul distance

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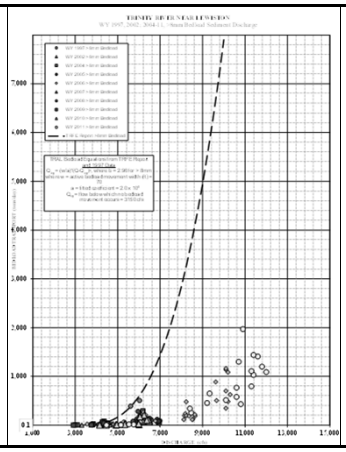

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