• Basic intro of HSR (1, 2)
• What is environmental compliance and why is it important?
• How is compliance managed (17)
• Introduction to the concept of EMMA (18)
• Chronology of EMMA
• Problem slide – Why EMMA? (3)
• Solution slide – What is EMMA? (4, 7, 12)
• Process Slide – How EMMA Works (5, 6, 9, 13)
• Software used (8, 15)
• SDLC Process
• Human Resources and Skill Sets (the team)
• Slide Summary of Modules
• Create and Review Daily Record (numerous slides quickly) (10, 11)
• Stakeholders & Users (16)
• Lessons learned slide
• The future slide
CALIFORNIA HIGH-SPEED RAIL

Project Sections & Station Communities Map

Jump to

PROJECT PHASES
PROJECT SECTIONS
STATION LOCATIONS

Proposed Statewide Alignment

Map data ©2017 Google, INEGI Terms of Use
WHAT AND WHY OF ENVIRONMENTAL COMPLIANCE

- To comply with the law and commitments made by the Authority
- To avoid shutdowns due to noncompliance, violations, or litigation
- Improve trust from regulatory agencies
- Improve communication among all stakeholders
- Establish good documentation and evidence
- Speed up the delivery of project environmental documents
- To raise awareness of endangered species and to avoid “take”
- To protect other valuable resources
WHY EMMA?

- Large program with lots of data (thousands of commitments)
- Need to be able to retrieve data even by groups removed from construction (program managers, agencies)
- Ensure consistency between CPs
- Reporting responsibility spread across many groups
- Allows for better auditing both internal and external
- Need to track compliance across large geography
CHRONOLOGY OF EMMA
WHAT IS EMMA?

- EMMA is a database of project commitments that can be linked to a location and evidence of compliance in order to create compliance reports.
WHY DO WE NEED EMMA?

• Large program with lots of data (thousands of commitments)

• Ensure consistency between CPs

• Reporting responsibility spread across many groups
  » Different organizational levels
  » Different geography

• Need to be able to retrieve data even by groups removed from construction (program managers, agencies)

• Allows for better internal and external auditing
HOW IT WORKS

Builder
Monitors, Subcontractors
Create Records*

Manager
DB, Prime Contractor
Review or Create

PCM
PCM or Caltrans
Review or Create

Agencies
Program
Manager, DB, Prime Contractor
Report
Audit

CP1
Create Records*
Review or Create

CP2/3
Create Records
Review or Create

CP4
Create Records
Review or Create

Caltrans
Create Records
Review or Create

*Records = Commitments (Permit, CEQA/NEPA, Agreements) + Evidence of Compliance + Location on a Map
SDLC PROCESS
THE DEV TEAM

• WSP
  » Chris Bente

• Cordoba

• Natoma Technologies
EMMA MODULES

- System Admin
  - Manage Obligants and Users
  - Manage Commitments
- Agent Admin
- Create EMMA Records
- Review EMMA Records
- All EMMA Records
- Sustainability
- Staff Special Approvals
- Mitigation Banking
• A report used to document compliance with commitments.
• Environmental commitments are anything the Authority “committed” to do in permits, plans, agreements, etc. and by extension are part of contracts
• During design, pre-construction, construction, post-construction as well as operations and maintenance
• In the field or in the office
• Daily, weekly, monthly, annual, or final
MY DAILY REPORT GRID – RECORDS CREATED BY ME

### My EMMA Records

<table>
<thead>
<tr>
<th>Package</th>
<th>Narrative</th>
<th>Activity Date</th>
<th>Report Date</th>
<th>Committee</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Test Daily report version 2.5</td>
<td>4/25/2017</td>
<td>4/25/2017</td>
<td>START</td>
<td>Continue Work</td>
</tr>
<tr>
<td>34</td>
<td>New Daily report version 2.5</td>
<td>4/25/2017</td>
<td>4/25/2017</td>
<td>START</td>
<td>Continue Work</td>
</tr>
<tr>
<td>34</td>
<td>Daily report created on 04/24 to validate functionality.</td>
<td>4/24/2017</td>
<td>4/24/2017</td>
<td>CMSUB</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>New Daily Report created on 04/24</td>
<td>4/23/2017</td>
<td>4/24/2017</td>
<td>PROGAPP</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>New report for Internal Review.</td>
<td>4/21/2017</td>
<td>4/21/2017</td>
<td>INTSUB</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>Testing inline attachment.</td>
<td>4/20/2017</td>
<td>4/20/2017</td>
<td>PROGAPP</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>Testing EMMA V2.3.2 02/10/2017 08:15 - 03/31/2017 09:20 DEV-TEST ENVIRONMENT April 6th</td>
<td>4/6/2017</td>
<td>4/6/2017</td>
<td>INTSUB</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>Test Reject Report by Approver</td>
<td>4/3/2017</td>
<td>4/6/2017</td>
<td>CMSUB</td>
<td>View</td>
</tr>
<tr>
<td>34</td>
<td>Test Reject report by approver.</td>
<td>3/21/2017</td>
<td>3/23/2017</td>
<td>PROGREJ</td>
<td>Resubmit</td>
</tr>
</tbody>
</table>
MY EMMA RECORD – STEP 1

Obligants: *
- DevBuilder
- CP1234

Packages: *

Narrative: *
Enter Your EMMA Record

Package Extent:
- Load Map

Report Activity Date: *

Attachments:

<table>
<thead>
<tr>
<th>Attachment Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose File</td>
<td>No file chosen</td>
</tr>
</tbody>
</table>

Attachment Description:

Attach

Save  Save and Continue  Reset
MY EMMA RECORD – STEP 2
CHOOSE A LOCATION
REQUIRED CONTENTS OF A EMMA REPORT (IN EMMA FORM OR ATTACHMENTS)

• Name of staff creating the daily report (if different from EMMA user)
• Name of person overseeing or observing the activity
• Authors special approvals, certifications, or credentials
• A list of commitments that are being documented
• Evidence of Compliance
• Date of activity
• Type of activity (e.g. Survey, Monitor, Prepare Documents, Meetings, Training, Resource Tracking, etc.)
• List other related daily Records
• All attachments must be text recognizable

See next slide for additional required contents at construction sites
TYPES OF EVIDENCE OF COMPLIANCE

- Engineering Plans
- Program Guidance Documents
- Contract Specs
- Submittal of Document
- Approval Correspondence
- Transmittal Correspondence
- Other Correspondence
- Site Inspection Documentation
- Sign-in sheet
- Measurement taken
- Photograph
- Receipt of Payment
- Survey Report
EMMA Record Review

Submitted by: Turner TBO Builder 13@coommunity.com
Obligant: Turner for New Environment
Package: Turner Package to Date
Activity Date: 3/30/2017

Narrative:
1. Analyze the daily records of different EMMA users. Note
2. The records are being observed by assessing
3. KAUMER: assess of evaluation
4. The data are being documented
5. A list of commitments that are being documented
6. Compliance Date of activity
7. Type of activity (e.g. Survey, Analysis, Produce Documentation, Meetings, Training, Resources)
8. Training, etc.) List other related daily Records X:

EMBioRecords - New Item
Page 1 of 1

Send for approval?
Contractor:
Project Source:
Construction Package:
Author’s Name:
Date:
Brief Descriptions:
Climate: Low [ ] High [ ] Conditions: [ ]
Activity: [ ] Monitoring, [ ] Survey [ ] Resource tracking [ ] Biological sample tracking

EMMA Record Commitments

<table>
<thead>
<tr>
<th>Permit Code</th>
<th>Commitment Code</th>
<th>Versions</th>
<th>Frequency</th>
<th>Narrative</th>
<th>Discipline</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF USFW BC</td>
<td>CR-27</td>
<td>1</td>
<td>Occurrence</td>
<td>The Service-approved control Biological</td>
<td>Single Commitment</td>
<td></td>
</tr>
</tbody>
</table>
### EMMA Record Narratives:
- Name of staff creating the daily report (if different from EMMA user)
- Name of person overseeing or observing the activity
- Authors special approvals, certifications, or credentials
- A list of commitments that are being documented
- Evidence of Compliance

### EMMA Record Attachments

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Resources Survey</td>
<td>Form Blank from EMMA.pdf</td>
</tr>
</tbody>
</table>

### EMMA Record Review History

<table>
<thead>
<tr>
<th>Review Seq</th>
<th>AssignedTo</th>
<th>Start Date</th>
<th>Completion Date</th>
<th>Review Comment</th>
<th>Attachment</th>
<th>Review Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sscaday+T30approver3@cordoba.5/3/2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Review Comment**

**Attachment**

- **Choose File**: No file chosen

**Attachment Description**

**Review Outcome**

- Save
- Approve
- Reject
- Another Peer Review

**Select Assignment**

- Test CM1
- Test CM1
- TestCM User2

**Review Attachments**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>

Submit  Cancel
SUSTAINABILITY

Water Conservation
Construction Equipment
Recycling and Waste Management
Pollution Control
Regionally Sourced Materials
Envirnmt Preferred Wood Prod
Renewable Energy Use
Recycled Material
Environmental Practices Public Education
Innovation
NEW ENHANCEMENTS IN 2017-2018

- Email Notifications
- User Feedback Form/Functionality/Workflows
- EMMA Record Workflow
- Dashboard and Reporting Update - Display Query on Map
- Saved User Search Settings (commitment, location, etc)
- UI/UX and Responsive Design
- Dynamic Help and Informational Pop-ups
- Permit Management
- Deadline Tracker
- Parcel Ready to Construct
- Issue Tracking/NCR
NEW MODULES & TECHNOLOGY IN 2017-2018

• New Modules
  » Cultural Resources Records and Mapping Management
  » Consultation Tracker for Permits, Amendments, and Re-examinations
  » Tree and Vegetation Tracking
  » Sustainability Reporting and Dashboard

• New Technology
  » Stand alone application more than likely using Xamarin
  » Disconnected editing
  » Angular JS
  » Cross platform browser agnostic
  » Integrated with the other HSR systems of record – Maximo, geoAMPS,
CONTACT US

Ethan Casaday, Environmental Compliance Planner
Phone: (530) 545-8400, Ethan.Casaday@hsr.ca.gov

Chris Bente, Planning & Design Technologies Manager
Phone: (916) 384-9978, Chris.Bente@hsr.ca.gov

Headquarters
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814
www.hsr.ca.gov

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