MANAGING ROAD SYSTEMS FOR ENVIRONMENTAL PROTECTION AND LONG TERM DURABILITY

ENVIRONMENTAL PERMIT DEVELOPMENT

JACK SKEAHAN AND THOMAS H. LEROY PACIFIC WATERSHED ASSOCIATES

ENVIRONMENTAL PERMIT DEVELOPMENT

PERMITS FOR ROAD RELATED SEDIMENT REDUCTION PROJECTS

REQUIRED OR MOST COMMON:

LAKE OR STREAMBED ALTERATION AGREEMENT (LSAA) - CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

REQUIRED FOR ALL ROAD-RELATED INSTREAM WORK EVEN IF CDFW IS THE FUNDING SOURCE

SECTION 401 WATER QUALITY CERTIFICATION (SECTION 401) - STATE WATER QUALITY CONTROL BOARD (SWQCB)

SIMILAR TO AN LSAA BUT MAY BE COVERED BY A PERMIT COORDINATION PROGRAM (PROGRAMMATIC PERMIT COVERAGE)

SECTION 404 WATER QUALITY CERTIFICATION (SECTION 404) - ARMY CORPS OF ENGINEERS (ACOE)

MAY BE COVERED BY A REPORTING OR NON-REPORTING NATIONWIDE PERMIT (NWP)

ENVIRONMENTAL PERMIT DEVELOPMENT

PERMITS FOR ROAD RELATED SEDIMENT REDUCTION PROJECTS

LINKS FOR MORE INFORMATION AND APPLICATIONS:

LAKE OR STREAMBED ALTERATION AGREEMENT (LSAA)

HTTPS://WILDLIFE.CA.GOV/CONSERVATION/ENVIRONMENTAL-REVIEW/LSA/

SECTION 401 WATER QUALITY CERTIFICATION (SECTION 401)

HTTPS://WWW.WATERBOARDS.CA.GOV/WATER_ISSUES/PROGRAMS/CWA401

SECTION 404 WATER QUALITY CERTIFICATION (SECTION 404)

HTTPS://WWW.USACE.ARMY.MIL/MISSIONS/CIVIL-WORKS/REGULATORY-PROGRAM-AND-PERMITS/OBTAIN-A-PERMIT/

HTTPS://WWW.USACE.ARMY.MIL/MISSIONS/CIVIL-WORKS/REGULATORY-PROGRAM-AND-PERMITS/NATIONWIDE-PERMITS/

ENVIRONMENTAL PERMIT DEVELOPMENT

ADDITIONAL PERMITS FOR ROAD RELATED SEDIMENT REDUCTION PROJECTS

MAY NOT BE REQUIRED DEPENDING ON PROJECT TYPE OR LOCATION:

- INCIDENTAL TAKE PERMIT (ITP) FOR TAKE OF LISTED SPECIES CDFW
- COASTAL ZONE PERMIT FOR DEVELOPMENT/WORK IN THE COAST ZONE CALIFORNIA COASTAL COMMISSION
- BIOLOGICAL OPINION (INCLUSION FOR PROJECT UNDER AN EXISTING BIOLOGICAL OPINION) - NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
- COUNTY GRADING PERMIT SHOULD NOT BE REQUIRED FOR RESTORATION PROJECTS ON EXISTING FEATURES LIKE ROADS (CHECK COUNTY SPECIFIC CODE TO BE SURE).

WHEN IS A PERMIT NEEDED AND WHICH ONES ARE TYPICALLY REQUIRED FOR ROAD-RELATED SEDIMENT REDUCTION PROJECTS

LSAA (CDFW)

Required when the project will result in the substantial alteration to the bed and banks of a lake or stream including diversion of surface waters.

SECTION 401 (SWRCB)

Required when the project will result in the discharge of dredge or fill material to jurisdictional waters of the state. Not required if under programmatic coverage.

SECTION 404 (ACOE)

Required when the project will result in the discharge of dredge or fill material to jurisdictional waters of the United States. Not required if project is done under an NWP (usually NWP #3) and all applicable Best Management Practices (BMPs) are followed. Will be required for projects impacting waters below the high tide line.

FOCUS ON LSAA APPLICATION PROCESS (MOST COMMON)

KEY CHANGES TO PREVIOUS PAPER APPLICATIONS:

LSAA APPLICATION NOW SUBMITTED VIA AN ONLINE PORTAL - ENVIRONMENTAL PERMIT INFORMATION MANAGEMENT SYSTEM (EPIMS)

HTTPS://EPIMS.WILDLIFE.CA.GOV/INDEX.DO/

PROJECT FEE PAYMENT CAN NOW BE SUBMITTED ONLINE (OR WILL NEED TO BE MAILED IN).

LSAA APPLICATION INCLUDES MOST OF THE RELEVANT INFORMATION FOR ROAD PROJECTS AND CAN BE REPURPOSED FOR THE 401 OR OTHER PERMITS.

BEGINNING THE LSAA APPLICATION PROCESS AND GENERAL TIPS

CREATE AN EPIMS ACCOUNT WITH LOGIN ID AND PASSWORD

START A NEW EPIMS APPLICATION FOR YOUR PROJECT TYPE AND LOCATION/REGION

INCLUDE AN AGENT OR OTHER CONTACT'S EMAIL AS A BACKUP

BEGIN ENTERING APPLICATION INFO BY SELECTING ONE OF THE APPLICATION FORMS

SOME FORM SECTIONS ARE READY FOR ENTRY OTHERS YOU WILL NEED TO SELECT "EDIT"

SAVE OFTEN

IMPORTANT: DO <u>NOT</u> MARK A FORM AS COMPLETE UNTIL EVERY FIELD IS FILLED OUT, ACCURATE, <u>AND</u> YOU ARE READY TO SUBMIT THE COMPLETE APPLICATION. ONCE A FORM IS MARKED AS COMPLETE IT CANNOT BE EDITED UNLESS AN EMAIL IS SENT TO CDFW REQUESTING THAT THEY UNLOCK THAT FORM.

SOME INFORMATION ENTERED IN THE EPIMS ONLINE APPLICATION:

- APPLICANT INFO
- SITE INFO, TYPE, PROJECT LOCATION (E.G., SITE NUMBER, STREET ADDRESS IF AVAILABLE, LAT/LONG, PARCEL NUMBER, COUNTY, ETC.)
- SITE-SPECIFIC PROJECT INFORMATION
- WATER DIVERSION INFORMATION IF SURFACE WATER WILL BE DIVERTED FOR COMPACTION OR DUST ABATEMENT (SEASON OF DIVERSION, LOCATION, DIVERSION INFO, SCREENED INLET INFO, AMOUNT DIVERTED, RATE OF DIVERSION, ETC.)
- AGREEMENT TERM, SEASONAL WORK PERIOD
- IMPACTS (TYPICALLY COVERED IN THE ADDITIONAL PAGES AND CNDDB REPORT)

- PROJECT LOCATION
 - DIRECTIONS TO SITE, USGS QUADS AND SECTION INFO, PARCEL NUMBERS, REFERENCES TO LOCATION AND SITE MAPS
- PROJECT DESCRIPTION
 - TYPE AND NUMBER OF SITES (E.G., SEVEN STREAM CROSSINGS), OVERALL GOAL OF PROJECT (E.G., SEDIMENT REDUCTION)
- PROPOSED WORK
 - UPGRADING WITH PROPERLY SIZED CULVERTS/ARMORED FILLSLOPE CROSSINGS
 - CROSSING DECOMMISSIONING
 - ROAD DRAINAGE INSTALLATION
 - SURFACE WATER DIVERSION

- DESIGN METHODOLOGY
 - METHODS FOR CULVERT SIZING (RATIONAL METHOD, USGS REGRESSION, DISCHARGE CALCULATION EQUATIONS, ETC.)
 - METHODS FOR SITE ASSESSMENT/ANALYSIS TO CHARACTERIZE A SITE AND DEVELOP APPROPRIATE TREATMENT PRESCRIPTIONS.
- REFERENCE TO EXISTING AND REGULATORY AGENCY ACCEPTED CONSTRUCTION STANDARDS
 (E.G., ROADS HANDBOOK, SALMONID RESTORATION MANUAL, CAFFERATA 2017, ETC.)
- WATER SOURCE FOR SOIL COMPACTION AND DUST ABATEMENT. SURFACE WATER DIVERSIONS NEED TO MEET ESTABLISHED CDFW CRITERIA TO PROTECT AQUATIC RESOURCES.

- TABLE OR OTHER SUMMARY FORMAT OF SITE-SPECIFIC DATA USED TO SIZE CULVERTS FOR 100-YEAR PEAK FLOW AND WOODY DEBRIS/SEDIMENT IN TRANSPORT.
 - DRAINAGE AREA
 - RUNOFF COEFFICIENT
 - CHANNEL LENGTH
 - ELEVATION DIFFERENCE
 - TIME OF CONCENTRATION
 - PRECIPITATION INTENSITY
 - ALTITUDE INDEX
 - MEAN ANNUAL RAINFALL
 - Q100 (DISCHARGE)
 - RECOMMENDED CULVERT DIAMETER (PROVIDE BOTH 1.0 HEADWATER DEPTH TO PIPE DIAMETER (HW/D) RATIO AND 0.67 HW/D RATIO)
 - RECOMMENDED TREATMENTS

- DEWATERING PLAN/MATERIALS AT WORK AREA FOR LIVE STREAMS AT TIME OF CONSTRUCTION
 - STRAW BALE DAM
 - WATER (SUMP) PUMP (NOT NEEDED IF GRAVITY DIVERSION WORKS AT SITE)
 - WATER HOSE
 - PLAN FOR PUMPING DIRTY/TURBID WATER OUT OF WORK AREA AND DISCHARGING ON VEGETATED SLOPES TO ALLOW FOR INFILTRATION

- IMPACTS TO RIVER/STREAM/LAKE, SPECIAL STATUS SPECIES, TREES/VEGETATION
 - CHECK BIOGEOGRAPHIC INFORMATION AND OBSERVATION SYSTEM (BIOS) FOR ANADROMY POTENTIAL AND DESIGN ACCORDINGLY
 - ABSENCE OF EVIDENCE IS NOT EVIDENCE OF ABSENCE
 - HTTPS://APPS.WILDLIFE.CA.GOV/BIOS6/
- SPECIAL STATUS ANIMAL OR PLANT SPECIES OR HABITAT PRESENCE
 - CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDB) ASSESSMENT, WRITE UP, AND RELEVANT MAPS/FIGURES (E.G., SPOTTED OWL, SALMONIDS, WETLANDS, ETC.) TO BE COMPLETED BY A QUALIFIED BIOLOGIST (SOME MATERIAL IS NOT FOR PUBLIC DISSEMINATION).
 - HTTPS://WILDLIFE.CA.GOV/DATA/CNDDB/
- AVOIDANCE AND MINIMIZATION MEASURES SUCH AS WORK TIMING AND MINIMIZING VEGETATION REMOVED

PHOTO PAGES:

- BEFORE PHOTOS OF SITES SHOWING IMPORTANT FEATURES
 - CULVERT INLETS/OUTLETS
 - PLUGGED CULVERTS
 - TENSION CRACKS
 - FILL FAILURES
 - DIVERSION GULLIES
 - SINKHOLES
 - CONNECTED ROAD SEGMENTS
 - UPSTREAM AND DOWNSTREAM VIEWS OF CHANNEL
 - OTHER FORENSIC EVIDENCE OF PAST CONDITIONS

PHOTO PAGES:

- PHOTOS SHOULD INCLUDE A FEATURE/MONUMENT THAT WILL NOT BE REMOVED DURING IMPLEMENTATION AND CAN BE MATCHED IN THE AFTER PHOTOS FOR EASY REFERENCE AND COMPARISON
- PHOTOS SHOULD BE TAKEN FAR ENOUGH AWAY TO INCLUDE THE ENTIRE WORK AREA (THINK POST IMPLEMENTATION) BUT NOT FAR ENOUGH TO LOSE DETAIL OR CONTEXT
- IF POSSIBLE, PHOTOS SHOULD BE TAKEN DURING OVERCAST CONDITIONS TO AVOID HIGH CONTRAST IMAGES (DAPPLED SUNLIGHT IS THE WORST)
- PHOTOS SHOULD INCLUDE A UNIQUE IDENTIFIER AND SHORT CAPTION EXPLAINING WHAT THE PHOTO IS SHOWING
 - E.G., PHOTO 1A_SC #1: VIEW DOWNSTREAM LOOKING AT THE PARTIALLY PLUGGED CULVERT INLET

CONCEPTUAL TREATMENTS:

- CONCEPTUAL TREATMENTS SHOULD BE SUMMARIZED IN A TABLE AND INCLUDE AT A MINIMUM:
 - SITÉ NUMBER (UNIQUE IDENTIFIER)
 - SITE TYPE (STREAM CROSSING, LANDSLIDE, ROAD SURFACE DISCHARGE POINT, ETC.)
 - SITE LATITUDE AND LONGITUDE
 - SEDIMENT DELIVERY/FUTURE YIELD VOLUME
 - DESCRIPTION OF THE PROBLEM AND RELEVANT SITE OBSERVATIONS
 - DESCRIPTION OF THE PROPOSED TREATMENT

MAPS, FIGURES, AND ADDITIONAL ATTACHMENTS:

- DOCUMENTS CAN BE UPLOADED TO THE DOCUMENTS AND MAPS FORM IN EPIMS. TYPICAL UPLOADED DOCUMENTS INCLUDE:
 - ADDITIONAL PAGES/PROJECT DESCRIPTION
 - PHOTO PAGES
 - CONCEPTUAL TREATMENTS
 - LOCATION MAP AND SITE MAP(S)
 - CNDDB INFORMATION SUCH AS LIST OF SPECIES AND OCCURRENCE MAPS/FIGURES
 - TYPICAL DRAWINGS OR DESIGNS
 - WATER DRAFTING GUIDANCE/PROTOCOLS
 - FEE PAYMENT RECEIPT OR COPY OF CHECK/MONEY ORDER (SEE BELOW)
 - ADDITIONAL DOCUMENTS THAT MAY BE RELEVANT TO THE APPLICATION IF AVAILABLE AT THE TIME OF SUBMITTAL (E.G., OTHER PERMITS, BIOLOGICAL REPORTS, CEQA SURVEY/COMPLIANCE REPORTS, ETC.)

PROJECT FEE CALCULATION AND PAYMENT:

- EACH INSTREAM PROJECT THAT FALLS UNDER LSAA JURISDICTION REQUIRES A PROJECT FEE.
- FEES ARE BASED ON PROJECT COST AND DETERMINED BY WHERE THEY FALL ON THE LSAA FEE SCHEDULE TIER.
 - HTTPS://NRM.DFG.CA.GOV/FILEHANDLER.ASHX?DOCUMENTID=207745&INLINE/
- PROJECT COST (FOR A STANDARD STREAM CROSSING CULVERT REPLACEMENT) CAN INCLUDE:
 - HEAVY EQUIPMENT TIME (EXCAVATOR, DOZER, WATER TRUCK, DUMP TRUCK, ETC.)
 - LABOR (CULVERT ASSEMBLY AND INSTALLATION, IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES, ETC.)
 - MATERIALS (CULVERT SECTIONS AND COUPLERS, ARMOR ROCK, ROAD ROCK, TRASH RACK, ETC.)

PROJECT FEE CALCULATION AND PAYMENT:

- FEES (EFFECTIVE 1/1/2023)
- STANDARD AGREEMENT
- FEE IF THE TERM OF THE AGREEMENT IS FIVE YEARS OR LESS:
 - \$699.75 IF THE PROJECT COSTS LESS THAN \$5,000.
 - \$877.75 IF THE PROJECT COSTS FROM \$5,000 TO LESS THAN \$10,000.
 - \$1,752.50 IF THE PROJECT COSTS FROM \$10,000 TO LESS THAN \$25,000.
 - \$2,630.25 IF THE PROJECT COSTS FROM \$25,000 TO LESS THAN \$100,000.
 - \$3,860.25 IF THE PROJECT COSTS FROM \$100,000 TO LESS THAN \$200,000.
 - \$5,235.75 IF THE PROJECT COSTS FROM \$200,000 TO LESS THAN \$350,000.
 - \$6,236.00 IF THE PROJECT COSTS \$350,000 OR MORE.

PROJECT FEE CALCULATION AND PAYMENT:

- THE NUMBER OF INDIVIDUAL PROJECTS ENTERED IN THE EPIMS APPLICATION WILL BE INCLUDED IN THE FEE PAYMENT FORM DROP DOWN MENU.
- SELECT THE PROJECT, THE FEE AMOUNT, AND THE PROJECT COST FOR EACH PROJECT.
- THE EPIMS APPLICATION WILL CALCULATE TOTAL FEES DUE AND PROVIDE OPTIONS FOR PAYMENT (ONLINE PAYMENT WITH CREDIT CARD OR MAILING IN A CHECK OR MONEY ORDER)
- ONCE FEES ARE PAID ENTER THE RECEIPT NUMBER IN THE EPIMS FORM, OR IF A CHECK/MONEY ORDER WAS SENT THE CHECK/MONEY ORDER NUMBER.
- UPLOAD A COPY OF THE FEE RECEIPT OR COPY OF THE CHECK/MONEY ORDER IN THE DOCUMENTS AND MAPS FORM.
- CDFW WILL NOT BEGIN PROCESSING THE APPLICATION UNTIL THE CORRECT FEES ARE RECEIVED.
- TOTAL LSAA PROJECT FEES CAN GET EXPENSIVE FOR PROJECTS WITH MULTIPLE SITES SO BUDGET ACCORDINGLY. FEES ARE IN ADDITION TO PERMIT DEVELOPMENT AND IMPLEMENTATION.

COMPLETING THE SECTION 401 APPLICATION

THE SECTION 401 APPLICATION IS SIMILAR TO AN LSAA WITH A FEW IMPORTANT DIFFERENCES

- FEES ARE CALCULATED DIFFERENTLY AND BASED ON THE INSTREAM DISTURBANCE AREA
- INSTREAM DISTURBANCE AREA WILL NEED TO BE CALCULATED FOR EACH INSTREAM SITE.
 - WIDTH OF STREAM CHANNEL DISTURBED X LENGTH OF CHANNEL DISTURBED
 - TEMPORARY AND PERMANENT (IF APPLICABLE) IMPACTS MUST BE CALCULATED
 - TEMPORARY IMPACTS ARE WITHIN THE EXISTING FOOTPRINT OF DISTURBANCE (E.G., ROAD PRISM, AGGRADED SEDIMENT WEDGE, SCOUR POOL, ETC.)
 - PERMANENT IMPACTS ARE OUTSIDE OF THE EXISTING FOOTPRINT OF DISTURBANCE
 - PERMANENT IMPACTS MAY OCCUR THROUGH INSTALLATION OF A LONGER CULVERT OR A
 NEW ROAD ALIGNMENT OR STREAM CROSSING
 - COMPENSATORY MITIGATION: SEDIMENT REDUCTION PROJECTS RESULT IN A NET BENEFIT TO THE WATERSHED SO CUMULATIVE POSITIVE IMPACTS OF STORM PROOFING CROSSINGS ARE INTENDED TO OFFSET ANY PERMANENT IMPACTS REQUIRING COMPENSATORY MITIGATION

COMPLETING THE SECTION 401 APPLICATION

THE SECTION 401 APPLICATION IS SIMILAR TO AN LSAA WITH A FEW IMPORTANT DIFFERENCES

- FEES ARE CALCULATED USING AN EXCEL SPREADSHEET AND BASED ON THE TOTAL INSTREAM DISTURBANCE AREA
 - https://www.waterboards.ca.gov/water_issues/programs/cwa401/#fees/
- BE AWARE THAT IF A SECTION 401 IS REQUIRED THERE ARE TYPICALLY 3-5 YEARS OF ANNUAL REPORTING ALONG WITH ANNUAL FEES UNTIL THE PROJECT IS PROVEN TO HAVE STABILIZED. AN EXAMPLE WOULD BE ACHIEVING AN 85% SURVIVAL RATE OF REPLANTED RIPARIAN VEGETATION OVER MULTIPLE YEARS.
- KEEP THIS IN MIND AND BUDGET ACCORDINGLY.
- APPLICATION FEES AND ANNUAL FEES CAN BE ESTIMATED BY DOWNLOADING THE EXCEL SPREADSHEET AND ENTERING YOUR PROJECT'S DISTURBANCE AREA.

COMPLETING THE SECTION 404 APPLICATION

THE SECTION 404 APPLICATION IS SIMILAR TO THE 401

- HTTPS://WWW.USACE.ARMY.MIL/MISSIONS/CIVIL-WORKS/REGULATORY-PROGRAM-AND-PERMITS/OBTAIN-A-PERMIT/
- MOST ROAD PROJECTS ARE COVERED UNDER A NON-REPORTING NATIONWIDE PERMIT (NWP) -NWP #3 WITHOUT A PRE-CONSTRUCTION NOTIFICATION
- THE ACOE REGULATES LARGER SCALE PROJECTS (THINK BAY DREDGING) AND DON'T HAVE THE TIME TO REVIEW PERMITS FOR SMALLER PROJECTS
- DUE TO THIS NATIONWIDE PERMITS ARE AVAILABLE
 - HTTPS://WWW.USACE.ARMY.MIL/MISSIONS/CIVIL-WORKS/REGULATORY-PROGRAM-AND-PERMITS/NATIONWIDE-PERMITS/
- RECENT SUPREME COURT RULINGS ARE LIMITING THE JURISDICTION OF THE ACOE
 REGARDING WETLANDS THAT ARE NOT CONNECTED BY SURFACE WATER TO STREAMS,
 RIVERS, OR LAKES

PERMIT REVIEW TIMELINES

LSAA

- CDFW HAS 30 DAYS TO DETERMINE IF AN APPLICATION IS COMPLETE
- IF IT IS DEEMED COMPLETE THEN CDFW HAS 60 DAYS TO ISSUE A DRAFT AGREEMENT
- IF IT IS NOT COMPLETE THEN CDFW WILL SEND OUT A LETTER OF INCOMPLETE WITH A LIST OF INFORMATION OR DOCUMENTS TO BE SUBMITTED
- SECTION 401
 - SWRCB HAS 30 DAYS TO DETERMINE IF AN APPLICATION IS COMPLETE
 - IF IT IS DEEMED COMPLETE THEN SWRCB HAS 6 MONTHS TO ISSUE A DRAFT PERMIT
 - IF IT IS NOT COMPLETE THEN SWRCB WILL NOTIFY THE APPLICANT AND REQUEST ADDITIONAL INFORMATION OR DOCUMENTS
- SECTION 404
 - ACOE WEBSITE MENTIONS 3-4 MONTHS AS THE TIME NORMALLY REQUIRED TO PROCESS
 AN APPLICATION INVOLVING A PUBLIC NOTICE BUT PREVIOUS APPLICATIONS HAVE
 TAKEN LONGER

CEQA/NEPA COMPLIANCE

THERE ARE MULTIPLE SURVEYS TO BE CONDUCTED AND REPORTS PREPARED PRIOR TO IMPLEMENTATION OF A ROAD-RELATED SEDIMENT DELIVERY PROJECT TO BE COMPLIANT WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

- WILDLIFE/AQUATIC
- BOTANICAL
- PALEONTOLOGICAL
- ARCHEOLOGICAL/CULTURAL RESOURCES

THESE ARE ONLY THE FOUR MAIN CEQA SURVEYS FOR ROAD-RELATED PROJECTS BUT OTHER SURVEYS MAY BE REQUIRED

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE IS REQUIRED FOR WORK ON FEDERAL PROPERTY

CEQA/NEPA COMPLIANCE

SOME SURVEYS ARE SEASONALLY DEPENDENT OR REQUIRE MORE THAN ONE SITE VISIT (PLAN ACCORDINGLY)

- WILDLIFE/AQUATIC
 - MAY REQUIRE A SECOND SITE VISIT PRIOR TO IMPLEMENTATION IF WATER OR AQUATIC
 SPECIES HAVE THE POTENTIAL TO BE PRESENT IN THE WORK AREA
- BOTANICAL
 - IF THIS SURVEY CAN BE DONE IN ONE YEAR, THEN A LATE SPRING SURVEY AND EARLY SUMMER SURVEY IS NEEDED
 - OTHERWISE A LATE FALL SURVEY FOLLOWED BY A SPRING/EARLY SUMMER SURVEY THE FOLLOWING YEAR IS NEEDED
- PALEONTOLOGICAL
 - TYPICALLY THIS IS AN OFFICE EXERCISE UNLESS THE WORK AREA IS IN A PALEONTOLOGICALLY SIGNIFICANT AREA, NO SEASONAL TIME RESTRICTIONS
- ARCHEOLOGICAL/CULTURAL RESOURCES
 - ONE SITE VISIT SHOULD BE SUFFICIENT, NO SEASONAL TIME RESTRICTIONS

ENVIRONMENTAL PERMIT TAKE AWAYS

- PLAN AHEAD
 - PERMIT DEVELOPMENT, AGENCY REVIEW, APPLICANT RESPONSE, AGENCY SITE VISIT, CEQA SURVEYS, ETC. ALL TAKE TIME
- PROVIDE A COMPLETE AND ACCURATE APPLICATION AND PROJECT INFORMATION
 - THIS WILL HELP AVOID BACK AND FORTH WITH AGENCIES, MAKE THEIR JOB EASIER IN REVIEWING THE APPLICATION/PROJECT, AND REDUCE PERMIT REVIEW TIMES
- CONSULT WITH AGENCIES EARLY AND OFTEN TO DEVELOP AND REFINE THE PROJECT SCOPE
 - DISCLOSE YOUR ENTIRE PROJECT EARLY SO THERE ARE NO SURPRISES
 - AGENCY CONSULTATION WILL IDENTIFY ANY PROBLEM SITES OR OTHER ISSUES PRIOR
 TO PERMIT SUBMITTAL AND SAVE TIME
- BUDGET YOUR PROJECT ACCURATELY AND SUFFICIENTLY WITH A LONGER TIMEFRAME THAN
 YOU MAY THINK
 - PERMITS, CEQA SURVEYS, BID PROCESSES, PROCURING MATERIALS, IMPLEMENTATION, CONTRACTOR DELAYS, FIRES, ETC. ALL OF THESE CAN TAKE MORE TIME (SUPPLY CHAIN ISSUES, DELIVERED MATERIALS MIX UP) OR COST MORE (INFLATION, TYPICAL COST INCREASES YEAR TO YEAR, DIFFERENT MATERIALS SUPPLIERS, ETC.)