

## Attachment D: Response to Comments on the Draft Environmental Assessment and Compatibility Determinations

The Draft Environmental Assessment and Draft Compatibility Determinations for the Proposed Implementation of Big Notch Project Flowage Easements in the Steve Thompson North Central Valley Wildlife Management Area, North, Central, and South Area Properties, were available for public comment for 39 days from July 25, 2024 to September 1, 2024. The U.S. Fish and Wildlife Service received four comment letters on the Environmental Assessment and Compatibility Determinations from Glide In Ranch (Glide In Ranch), Conaway Preservation Group (Conaway), Yolo Bypass property owners (Landowners), and Yolo County (Yolo). This Response to Comments contains responses to all the comments submitted, grouped by topic. The comments are copied directly from the letters, minus any footnotes. The topic areas are:

- Conflicts with easement interest
- Description of proposed action/use
- Scope of proposed action
- Scope of compatibility determination
- Range of alternatives
- Effects analysis
- Model issues
- Availability of resources (CD)
- Monitoring
- Stipulations/mitigation
- Compatibility justification
- NEPA adequacy
- Opposition to proposed action
- Support for proposed action

### Conflicts with Easement Interest

**Glide in Ranch-1:** The DCDSPU is in conflict (possible breach) with the USFWS Easement.

GIR entered into a Wetland Reserve Program #66-9104-3-2333, Grant of Easement (Easement), dated August 23, 1996 with the US Department of the Interior US Fish and Wildlife Service (USFWS). The Easement lands (851.93 acres) were acquired for waterfowl habitat. The Easement is a perpetual easement for the management of migratory birds. The Draft USFWS Compatibility Determination and Special Use Permit (DCDSPU) is in direct conflict with the specific intent of the Easement to be managed by GIR for waterfowl habitat of migratory birds exclusively.

Page 4, Section #2 - Easement waters are limited to the amount of water reasonably required to maintain pond portions of Easement lands in a flooded condition at an elevation not to exceed the historical fall and winter season levels that are presently used by Grantor (GIR} when flooding it's ponds.

Additional waters from the Big Notch Project as a result of the DCDSPU will add more water than historically used by GIR in the flooding of its Ponds during the fall and winter seasons. The additional water will be unmanaged and damaging (additional water depth and frequency) to waterfowl habitat for migratory birds, as well as limiting access to Easement Lands.

**Response:** The conservation easements on properties within the Yolo Bypass were acquired by USFWS with the knowledge that there will be periods of time these properties would be impacted by flood flows within the bypass. The Yolo Bypass, as part of the Sacramento River Flood Control Project authorized through the Flood Control Act of 1960, manages the historic flooding in the Sacramento Valley. The Bypass currently is designed to receive up to 343,000 cfs or approximately 85 percent of maximum Sacramento River flow and experiences at least some flooding during 7 out of 10 years, as described in the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project (YBHRFPP) EIS/EIR Section 2.1.5.1.

Since the YBHRFPP would increase the frequency and duration of flooding in the Yolo Bypass and affect the USFWS's easement interest, a permit is required to allow the use. 50 CFR 25.44(b) provides that USFWS require permits for use of easement areas where proposed activities may affect the property interest acquired by the United States. Special use permits may be issued to property owners, third parties at the owner's request, or governmental entities which have acquired a partial interest in the servient estate by condemnation.

Prior to issuing the special use permit, the USFWS must determine that the proposed activities affecting our easement interest are a compatible use (50 CFR 25.44(b)). A compatible use is "... a proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge (50 CFR § 25.12(a)). The USFWS compatibility policy states that "... the fact that a use will result in a tangible adverse effect, or a lingering or continuing adverse effect is not necessarily the overriding concern regarding 'materially interfere with or detract from.' These types of effects should be taken into consideration, but the primary aspect is how does the use and any impacts from the use affect our ability to fulfill the System mission and the refuge purposes..."603 FW 2.11(B)(2).

With respect to the impact of flooding on the hunt clubs, our compatibility analysis was focused on the change in the number, duration, and depth of flood events in the Yolo Bypass compared to the baseline, and whether the change would likely cause any hunt clubs to discontinue operating. The comparison of Big Notch Project impacts with the baseline is important since current DWR flowage easements and usage of Yolo Bypass to convey flood flows predated the Service's acquisition of easements in the area. On average, wetland units in the Yolo Bypass with USFWS easements currently experience 25 days of flooding annually that exceed 6 inches above management targets. With implementation of the Big Notch Project, flooding in the wetland units with USFWS easements that exceeds 6 inches above management targets would increase by an average of 7 days or 28 percent annually.

Our compatibility determinations explain that while increased flows under the Big Notch Project could affect our easement interest, the effects would not rise to the level of materially interfering with or detracting from the refuge purposes or Refuge System mission during the 5-year term of the special use permit because it is unlikely that any hunt clubs will discontinue operations during the permit term so impacts on migratory birds would be minimal and consistent with our understanding of impacts when we acquired the easement (see response to Landowners comment 36 below). We have limited the term of the permit to a maximum of five

years so that we can assess and determine means of addressing the impacts, if any, of the potential increased flooding. Moreover, by limiting the term of the permit to a maximum of 5 years, the accumulation of potential flooding impacts will be limited.

USFWS recognizes the potential impacts of this amount of increased flooding over the long term on hunt club infrastructure and operations and is committed to working with DWR, Reclamation, and easement landowners to develop and implement measures to avoid and minimize those impacts and improve the sustainability of managed wetlands in the future. The 5-year term of the special use permit will allow USFWS to evaluate how the Big Notch Project operations increase the duration and frequency of flooding on easements, as well as design and evaluate measures to avoid and minimize potential impacts. Prior to end of the 5-year term and in anticipation that DWR will request a longer-term permit, the USFWS will reevaluate the compatibility of the increased flows in consideration of the implementation of specific measures designed to support continued operations on the easement lands. In addition, the USFWS will complete additional NEPA compliance for any request for a long-term permit, including any measures deemed necessary to address long-term flooding impacts.

USFWS has determined to limit the term of the special use permit to 5 years to that it can analyze more fully the impacts of the increased flooding frequency and thus support continued operations on the easement lands. To accomplish this, USFWS is entering into and implementing an agreement with Reclamation for up to \$18 million, subject to available appropriations, to analyze impacts and develop actions to avoid and minimize impacts from the increased flooding frequency and duration due to operation of the Big Notch Project on USFWS easement interests. The USFWS also acknowledges that landowners will receive from DWR payments for the flowage easements. In addition, the USFWS will continue to work collaboratively with landowners that have USFWS Easements and the Yolo Wildlife Area, to create and implement a holistic approach to maintain migratory bird habitat within the Yolo Bypass on CDFW lands and USFWS easement properties. The implementation of this holistic approach will ensure the USFWS interests in these properties would continue to occur while maximizing, to the extent practicable, landowners' use of the properties.

**Glide in Ranch-2:** The DCDSPU does not address the GIR/NRCS wetland conservation easement. Project waters are not allowed on GIR properties per the NRCS easement requirement. This easement is over 342 acres of GIR's northern most properties. The Project waters, allowed by the USFWS Special Use Permit would flood the NRCS easement properties due to location and the hydraulic gradient as noted in DU's impact analysis.

The NRCS easement states: "Except for normal farming, pasturing, and grazing the landowner (GIR) agrees not to allow others to do any act by which the value or title to property may be diminished or encumbered."

Additionally, the NRCS easement states under: Prohibitions (6.) "diverting or causing or permitting the diversion of surface or groundwater into, within or out of the easement area by any means".

**Response:** The Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives of the Service's Environmental Assessment (EA), entails USFWS' issuance of a 5-year special use permit to DWR to increase the frequency and duration of flows over USFWS

easements; it does not authorize the operation of the Big Notch Project or flowage over NRCS easements. Effects of the Big Notch Project on NRCS's easement interests and permitting for projects that affect those interests are beyond the scope of this analysis and are not further addressed here.

### Description of Proposed Action/Use

**Conaway-1:** The EA's description of the Proposed Action is insufficient because it does not reflect substantial project changes since DWR approved the Big Notch Project and Reclamation issued its 2019 Record of Decision (ROD). Since issuance of the 2019 ROD, DWR has made the following project changes that have either undergone inadequate, post-hoc environmental review or none at all:

- Removal of cutoff walls in the Tule Channel;
- Removal of an Agricultural Road Crossing bridge and an under-channel siphon with emergency overflow in the Tule Channel;
- Assorted channel improvements in the Tule Channel;
- Changes to the elevations of the headworks bridge, which was approved and modeled with an elevation of between 29 to 32 feet but was constructed with an elevation of between 32 and 34 feet.

These significant changes to the Big Notch Project have the potential to result in new and substantially more severe significant environmental effects not considered in the 2019 EIR/EIS and thereby not considered in the EA. Additional environmental review is required (discussed more below). These are, of course, only the changes that CPG and other affected parties have been able to discover. DWR may have further changed the Big Notch Project in ways that would require additional analysis and mitigation in the EA. USFWS must correct these insufficiencies in the description of its Proposed Action. The EA must rely on correct assumptions and reflect the actual Big Notch Project that DWR has planned, designed, and built, and now seeks to obtain the legal right to operate. Under NEPA, an "agencies' EA is inadequate . . . [when] the agencies failed to take the requisite 'hard look' by relying on incorrect assumptions"

**Response:** First, the Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives of the EA, entails USFWS' issuance of a special use permit for a maximum of 5 years to DWR to increase the frequency and duration of flows over USFWS easements, not to operate the Big Notch Project. Commentor has confused the NEPA conducted by DWR and BOR for the Big Notch Project with the EA conducted by the Service for its proposed action here, as described above. Moreover, as described in Yolo Bypass Salmonid Habitat Restoration and Fish Passage Final EIS/EIR (EIS/EIR) (2.4.3 Operations) and Reclamation's Record of Decision, the increased flows under the Big Notch Project of up to 6,000 cfs may occur November 1 through March 15 of each year based on the Sacramento River elevation at the Fremont Weir. The Fremont Weir gates may remain partially open after March 15 to provide adult fish passage. However, flows through the gates after March 15 could not exceed the available capacity of Tule Canal. The special use permit would only allow DWR to increase the frequency and duration of flows over USFWS easements consistent with these parameters.

None of the Big Notch project changes listed by the commentor changed these parameters upon which the Service's EA is based; consequently, commentor's concerns that the EA is

inadequate because of concerns about the EIS/EIR are misplaced. Moreover, commentor's characterization of the EIS/EIR fails to note the Addendum #2 issued by DWR on February 27, 2024 following CEQA guidelines, which sets forth environmental analysis of the proposed removal of the cutoff walls and ARC 1 bridge from the project description analyzed in the 2019 EIS/EIR. The conclusion of the Addendum #2 review was that, based on the information presented in Section 2.3, Environmental Checklist for Supplemental Environmental Impact Analysis, no conditions triggering a subsequent EIR were present. DWR received no comments on Addendum 2 and considers this document to be the equivalent of a NEPA Supplemental Information Report for the 2019 EIS/R analysis. Concerns about the EIS/EIR are not properly raised with respect to the Service's proposed action, and will not be addressed further here.

**Conaway-2:** The EA also lacks specificity on the end date of the proposed flooding. In its description of the Proposed Action, the EA states that "gates may remain partially open after March 15 to provide adult fish passage." The draft compatibility determinations further state "flows through the gates after March 15 could not exceed the available capacity of Tule Canal, which is typically about 300 cfs"; however, nowhere does the EA define the date on which these expanded flows would cease, and the analysis does not appear to address flows after March 15 (discussed below). More detail is required for reviewers to evaluate the merits and effects of the Proposed Action.

**Response:** As stated on EIS/R Section 2.4.3 of the EIS/R "All gates would close when the river elevation falls below 14 feet." Typically, this defined physical condition occurs on the Sacramento River annually in May/June (DWR 2021). This EA is based on and tiers from the prior EIS/R analysis; therefore, this specific condition defines when all flows through the gates cease.

While connectivity of drains in the bypass may not exactly match drain features of the fields, the existence and operation of pumps, water control structures, and leaks cannot be captured by any single model as these features are subject to local land management operators to control at their discretion. The model assumes if a land manager needs to drain a field, they will operate local water control to do so and that overall conditions are captured in the real measured flow and stage data used to calibrate the model. Operation of the Big Notch Project is a controlled structure intended to moderate flows entering into the Yolo Bypass to enhance floodplain rearing and fish passage in the Bypass and/or other suitable areas of the lower Sacramento River basin. During the flood season, November 1 to March 15, DWR, as the operator of the Big Notch Project as described in Section 2.4.5 Monitoring and Adaptive Management and Appendix C Adaptive Management Biological Goals (Section 5.4) of the YBSHFP EIS/EIR, will monitor the flows within the Tule Canal to minimize impacts to local land management operators. Outside of the flood season DWR, as described in Appendix C Adaptive Management Biological Goals (Section 5.4) of the YBSHFP EIS/EIR, will monitor the flows within the Tule Canal to minimize impacts to local land management operators. This will be completed as a component of the adaptive management plan to collect surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW. In addition, some of these gages will provide real-time information that will be made publicly available and may be useful for water management by other interests in the Yolo Bypass.

**Conaway-3:** Accurately characterizing the Proposed Action is especially important here because the EA includes only the one action alternative. If USFWS’s description of the Proposed Action does not properly reflect DWR’s actual project, then it must at least include and equally analyze an alternative with the now-constructed Big Notch Project changes. DWR may (and so far does) disagree with CPG’s characterization of the Project, and this highlights the fact that there is an “unresolved conflict[] about the proposed action with respect to alternative uses of available resources,” which, pursuant to the U.S. Department of the Interior (DOI) NEPA regulations, indicates that additional action alternatives must be included.

**Response:** See response to Conaway 1. With respect to Commentor’s concerns about the range of alternatives considered by FWS in its EA, note that the range of alternatives that the agency must consider under NEPA is based on the purpose and need of the proposed agency action, which in our case, is authorizing DWR to increase the frequency and duration of flooding on FWS easement properties, not the operation of the Big Notch Project itself. An agency is not required to “consider alternatives which are infeasible, ineffective or inconsistent with the basic policy objectives for the management of the area. *Westlands Water District v. DOI*, 376 F.3d 853, 868 (9<sup>th</sup> Cir. 2004), citing *Headwaters, Inc. v. BLM*, 914 F.2d. 1174, 1180 (9<sup>th</sup> Cir. 1990). The touchstone is whether USFWS’s selection and discussion of alternatives fosters informed decision-making and public participation, which has occurred in this situation. *Westlands* at 868, citing *California v. Block*, 690 F.2d. 753, 767 (9<sup>th</sup> Cir. 1982).

**Conaway-14:** The draft compatibility determinations are similarly deficient. Like the EA, the compatibility determinations do not account for the changes made to the Big Notch Project by DWR after issuance of the 2019 ROD.

**Response:** See response to Conaway 1.

### Scope of Proposed Action

**Conaway-5:** The EA suffers from other analytical failings. The EA repeatedly states that future “[p]rogram-level activities,” such as mitigation actions, have the potential to impact environmental resources, but fails to adequately identify these activities and their impacts, and instead defers analysis to an unknown future time as part of undefined future compliance procedures. While it is true that NEPA allows programmatic documents to defer some decisions and analysis, the EA is not a programmatic document, and USFWS cannot defer mitigation and analysis by relying on another program’s undefined and unanalyzed activities. DOI’s NEPA regulations state that “[t]he analysis of the proposed action and any alternatives must include an analysis of the effects of the proposed action or alternative as well as analysis of the effects of any appropriate mitigation measures . . . that are considered.” Here, USFWS has identified—but not analyzed—mitigation for flooding impacts.

In its 2024 impact analysis, Ducks Unlimited disclosed that it has developed “137 possible improvements that span the study area” to offset flooding impacts on private landowners that will occur as a result of the Proposed Action. These improvements are required to mitigate the Proposed Action’s adverse environmental effects. USFWS is aware of these improvements, and aware that without implementing some or all of them, “[d]ue to the increased duration and frequency of flows, the Proposed Action alternative has the potential to impact wetland management actions conducted by private land managers within the Proposed Action area.” Flooding this area with 6,000 cfs without mitigation to

lessen impacts would result in a decline in waterfowl in the area, which would then lead to a decline in hunting and ultimately the discontinuation of Yolo County hunting clubs, which would lead to the loss of “the critical wetlands values protected by the Service’s easement interest” and the subsequent loss of habitat value, waterfowl food supply, and listed species (such as giant garter snake). The adverse socioeconomic and land use effects associated with this proposed use include, but are not limited to, economic impacts to local duck clubs that may lose membership and resources or be shuttered altogether; reduced roadway access that could cause disturbances for businesses and recreationists; and loss of habitat detracting from the purposes of the Steve Thompson North Central Wildlife Management Area (WMA).

**Response:** As described in Section 1.2 Proposed Action and Section 3.2. Alternatives, the Proposed Action entails USFWS' issuance of a special use permit for a maximum of 5 years to DWR for flooding of increased frequency and duration. While FWS has found the proposed use to be compatible with the purposes of the WMA and the Refuge, it recognizes that the increased flooding frequency and duration may have impacts to the easement landowners that we have not yet been able to fully determine.

While the compatibility determination does not stipulate mitigation, the special use permit terms and conditions will include a commitment to analyze the impacts of the flooding on easement properties and develop actions to ensure continued hunt club operations on easement lands. In addition, the USFWS will work collaboratively with landowners that have USFWS Easements and the Yolo Wildlife Area to create and implement a holistic approach to maintaining migratory bird habitat on CDFW lands and USFWS easement properties. The collection and evaluation of real-time data with increased flows resulting from operation of Big Notch Project is critical to inform this effort.

Impacts described within the EA for issuing the special use permit for a maximum of 5 years do not rise to the level that would require mitigation to avoid significance. However, the Service has determined to limit the term of the special use permit to 5 years so that it can analyze more fully the impacts of the increased flooding frequency and thus support continued operations on the easement lands. To accomplish this, USFWS is entering into and implementing an agreement with Reclamation for up to \$18 million, subject to available appropriations, to analyze impacts and develop actions to avoid and minimize impacts from the increased flooding frequency and duration due to operation of the Big Notch Project on USFWS easement interests. The USFWS also acknowledges that landowners will receive from DWR payments for the flowage easements. In addition, the USFWS will continue to work collaboratively with landowners that have USFWS Easements and the Yolo Wildlife Area, to create and implement a holistic approach to maintain migratory bird habitat within the Yolo Bypass on CDFW lands and USFWS easement properties. The implementation of this holistic approach will ensure the USFWS interests in these properties would continue to occur while maximizing, to the extent practicable, landowners' use of the properties.

The improvements mentioned in Ducks Unlimited’s report are preliminary, have not been coordinated with landowners, or analyzed in the context of the larger landscape in the Yolo Bypass. As described in Chapter 4 Affected Environment and Environmental Consequences of the EA, program-level activities, such as the aforementioned actions, are broad in scope and not

fully defined and will, therefore, undergo additional environmental compliance procedures prior to implementation. CEQ regulations specifically allow tiering such as this "...when the sequence from an environmental impact statement or environmental assessment is . . . from an environmental impact statement or environmental assessment on a specific action at an early stage (such as need and site selection) to a subsequent statement or assessment at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the agency to focus on the issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe." (40 CFR 1501.11(b)(2)(ii)).

During the 5-year term of the special use permit, the USFWS will work with landowners, DWR, and Reclamation to complete the planning, design, environmental compliance, and permitting work for the measures that will inform consideration of any longer-term permit.

### Scope of Compatibility Determinations

**Landowners-31:** DU notes that "impacts scores were typically larger in wetland units located in the eastern margins of each Area, while wetlands located further west tended to have lower scores." (Section 4.) USFWS has issued compatibility determinations across three areas: North, Central, and South. Given the degree of variation by wetland unit, and in East/West orientation, USFWS should have analyzed and issued compatibility determinations by individual wetland unit to better recognize the high degree of impacts on some wetland units that will almost certainly result in loss of those units if BNP Operations are permitted as proposed.

**Response:** It is standard practice to include the entire area where a proposed use would occur in a single compatibility determination. In this case, we chose to prepare three separate compatibility determinations given the overall differences in effects between the three areas. In addition, the hunt clubs in each area share drainage infrastructure and will likely share common avoidance and minimization measures. Given the interdependence of drainage among adjacent landowners, preparing compatibility determinations at the unit level would introduce unnecessary complexity in identifying impacts and holistic solutions and is not warranted.

### Range of Alternatives

**Landowners-34:** The EA evaluates only one action alternative – grant of a short-term special use permit – and a no action alternative. Thus, the EA does not comprehensively analyze the cumulative impacts of longer term proposed operation of the BNP, nor of any increases in depth, duration, or frequency of flooding associated with the expanded scope of rights DWR is seeking to condemn and pursue as part of proposed action subject to its Adaptive Management Plan.

**Response:** See response to Conaway 1. Section 4.7 Cumulative Impacts describes past, present, and reasonably foreseeable future actions.

### Effects Analysis

**Glide in Ranch-9:** The DCDSUP does not address and or analyze the impacts (water depths and drainage constraints of North Area Easement Land's mitigation project improvements), to Central Area Easement Lands.

**Response:** See response to Conaway 5.

**Landowners-27:** In 2024, the North Area properties experienced drainage issues as the Lower Elkhorn Basin Levee Setback area drained. Insufficient study has been made of the interaction of these issues with the operation of the BNP.

**Response:** USFWS’s environmental assessment is tiered from the 2019 YBSHRFP EIS/EIR. EIS/R Appendix U: Lower Elkhorn Basin Levee Setback and Sea Level Rise Impact includes a comprehensive look at the interaction between the Project and the LEBLS project. This document analyzes how the inundation extent within the Yolo Bypass would be impacted due to implementation of Big Notch Project and Lower Elkhorn Basin Levee Setback (LEBLS). The TUFLOW model includes LEBLS in the modeled scenarios. Drainage issues around LEBLS mentioned in Winter 2023/2024 will not reflect the final conditions of the project. As of September 2024, LEBLS project is under construction with excavation and grading activities that will further improve flow of water in the Yolo Bypass.

**Landowners-29:** DU section 1.4.1 states climate change could result in additional surface runoff, so why was an estimate of increased runoff not used in the study? Climate change projections must be studied.

**Response:** The Environmental Assessment tiers from the 2019 YBSHRFP EIS/EIR. EIS/EIR Section 4.4 and Appendix E CalSim II Assumptions and 2018 Coordinated Operations Agreement Sensitivity Analysis describe the CalSIM II modeling of California water supply with and without climate change impacts. CalSim II is considered the best available tool for simulating system-wide operations; the model also contains simplifying assumptions in its representation of the real system. CalSim II’s predictive capability is limited and cannot be readily applied to hourly, daily, or weekly timesteps for hydrologic conditions. The model, however, is useful for comparing the relative effects of alternative facilities and operations within the Central Valley Project/State Water Project system on a monthly timestep. Modeling of the existing conditions and comparable level of development alternatives assumes a 2030 hydrology and sea level rise with existing infrastructure and regulatory conditions. Modeling of the No Action Alternative and comparable level of development alternatives assumes a 2070 hydrology and sea level rise and reasonably foreseeable infrastructure and regulatory conditions.

Flood frequency/duration estimates are considered through CalSIM II and incorporated into CBECs model. There was no correction of TUFLOW for climate change beyond using the most recent 16 years of hydrology, which are expected to be representative of the conditions during the limited term of the special use permit. Both the CalSim II and TUFLOW models were peer reviewed as discussed in 2019 YBSHRFP EIS/EIR Appendix O, Comments and Responses, Master Response 2: Science Review Panel.

**Conaway-4:** When relying on previous analysis, USFWS “must determine that the analysis and assumptions used in the referenced document are appropriate for the analysis at hand.” It must ask:

“Is the existing analysis valid in light of any new information or circumstances?”

“Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new Proposed Action?”

“Are all the impacts resulting from the new Proposed Action addressed in the existing NEPA document?”

Here, the answer to these questions is “no” because the analysis performed in the 2019 EIS/EIR did not address subsequent changes to the Big Notch Project that have altered the significance conclusion of certain impacts. In particular, impacts to agriculture, biological resources, and socioeconomic conditions likely will increase. Additional analysis is required that considers these and any other significant changes to the Big Notch Project.

**Response:** See response to Conaway 1.

**Conaway-6:** The inundation will also permanently affect agricultural operations within the study area—impacts that are completely ignored in the EA.

**Response:** The subject of this EA is the Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives, which entails USFWS' issuance of a special use permit for a maximum of 5 years to DWR to increase frequency and duration of flows over our easements, not the operation of the Big Notch Project. Big Notch Project designs and any associated impacts, specific to the Yolo Bypass Salmonid Habitat Restoration and Fish Passage EIS/EIR, are under the purview of the federal lead, Reclamation, and state lead, DWR.

**Conaway-8:** Further, the Ducks Unlimited impact analysis indicates that changes on the USFWS properties, such as the necessary mitigation, could have adverse effects elsewhere in the Bypass, including on CPG property, and that additional study is needed

**Response:** See response to Conaway 5.

**Conaway-9:** As stated, the EA “must include . . . analysis of the effects of any appropriate mitigation measures . . .” This mitigation—and its effects analysis—must be provided in the EA before approval and implementation of the Proposed Action, not “during the initial operation of the Project” after flooding impacts would have already occurred. Post-hoc mitigation is especially problematic here because these improvements will result in environmental impacts of their own—construction-related air and greenhouse gas emissions, disturbance or take of special-status species, such as the giant garter snake, construction-related noise, etc.—which must be analyzed in the EA.

Omitting this necessary mitigation and its impacts from the EA also violates NEPA’s rule against segmenting. NEPA does not allow “segmenting an action into smaller component parts.” “[C]onnected actions” must be “considered in the same NEPA review,” including actions that:

- (1) Automatically trigger other actions that may require NEPA review;
- (2) Cannot or will not proceed unless other actions are taken previously or simultaneously; or
- (3) Are interdependent parts of a larger action.

As demonstrated just above, the need for these improvements is “automatically trigger[ed]” by implementation of the Proposed Action; the Proposed Action “[c]annot . . . proceed” without them without resulting in numerous adverse environmental effects; therefore, the Proposed Action is dependent on these improvements. All criteria for impermissible segmenting under NEPA have been met. “A segmentation is improper when the segmented project has no independent justification, no life of its own, or is simply illogical when viewed in isolation.” These improvements have no independent justification and would not exist but-for USFWS’ issuance of this special use permit. NEPA requires that

the EA include and analyze these improvements and not defer analysis to some unknown future time after an impact has occurred.

**Response:** As described in the response to Conaway comment 5 above, impacts described within the EA for issuing the special use permit for a maximum of 5 years do not rise to the level that would require mitigation to avoid significance. The improvements mentioned in the Ducks Unlimited report are preliminary, have not been coordinated with landowners, or analyzed in the context of the larger landscape in the Yolo Bypass. As described in Chapter 4 Affected Environment and Environmental Consequences, program-level activities, such as the aforementioned actions, are broad in scope and not fully defined and will, therefore, undergo additional environmental compliance procedures should FWS determine to implement them. CEQ regulations specifically allow tiering such as this “...when the sequence from an environmental impact statement or environmental assessment is . . . from an environmental impact statement or environmental assessment on a specific action at an early stage (such as need and site selection) to a subsequent statement or assessment at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the agency to focus on the issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe.” (40 CFR 1501.11(b)(2)(ii)).

**Landowners-19:** USFWS concludes that impacts to local and regional economics are not anticipated because of mitigation measures. But those measures are not defined, designed, funded, permitted, constructed, or vetted through environmental review. Local economics will be impacted, and there’s no discussion of how or to what extent mitigation measures will minimize impacts – if they will be effective at all. USFWS acknowledges that land use will be affected – that wetland management will be affected, other species will be affected, habitat will suffer, and that all of these things will detract from the purposes of the WMA. The determination of compatibility is nonsense. It flies in the face of the only available data, flawed and incomplete as it is.

**Response:** See response to Glide In Ranch comment 1 . The EA (Section 4.5, Local and Regional Economies: Environmental Consequences), was revised to reflect that limiting the term of the special use permit to a maximum of 5 years would minimize impacts to the local and regional economy. Depending on the actual level of flooding experienced in the Yolo Bypass during the 5 years of the permit term, some increased costs and reduced revenue for hunting clubs may occur. If so, these increased costs and reduced revenue are expected to be at least partially offset by payments landowners receive from DWR for the flowage easements. As a result, no more than minor impacts on the local and regional economy are anticipated. Regarding the effects of increased flooding associated with the Big Notch Project on wetlands, see response to Glide in Ranch comment 1. Regarding effects on wildlife, see the revised discussion in Section 4.3 of the final EA. Regarding effects on land use, see the revised discussion in Section 5.3 of the final EA.

**Landowners-35:** USFWS acknowledges that the effects of flooding on hunt club operations described are expected to accumulate over time, and that the increase in flood frequency and duration under the BNP would incrementally increase the cost of hunt club operation and decrease hunt opportunities. But no economic analysis has been done to assess the degree of impact. Nor has loss of food supply been

analyzed – in terms of direct habitat or indirect effect due to impacts on agricultural activity in the Bypass. Nor have effects on other species been identified or studied.

**Response:** The EA (Section 4.5, Local and Regional Economies) has been revised to include estimates of the contributions of the hunt clubs to the regional economy based on an economic study prepared for Grasslands Ecological Area that included private wetlands (Weissman and Strong 2001). Regarding the effects of increased flooding associated with the Big Notch Project on agricultural activities in the Yolo Bypass, see response to Conaway comment 6. Regarding food supply, Ducks Unlimited (2017) evaluated various proposed Big Notch management alternatives to assess the effects of alternatives on waterfowl energetics. They evaluated waterfowl food energy resources, as described within the Central Valley Joint Venture's Implementation Plan (2006) and compared food energy resources between the existing conditions alternative and the four operational alternatives. Except for very wet years, they reported that the various flooding alternatives would result in only minor changes to the carrying capacity of migratory birds (the point when supply of food falls below food demand); they also determined food resources would still be available within the Yolo Basin beyond the areas flooded irrespective of the flooding alternatives.

**Landowners-36:** The assertion nonetheless by USFWS that it is unlikely any hunt clubs would discontinue operations due to the incremental impacts of BNP operations during the 5-year term of the proposed special use permit is unfounded, a dangerous assumption, and an unwarranted risk. Further, USFWS acknowledges that the likelihood is expected to increase the longer the BNP is operated unless mitigation measures that avoid or minimize impacts are implemented. Given that there is insufficient evidence of the efficacy of any as-yet theoretical mitigation measures, but long-term operation of the BNP is planned, it appears USFWS is piecemealing its environmental review process to avoid recognizing the ultimate harm to the WMA that will result from DWR operating the BNP.

**Response:** Our rationale for concluding that it is unlikely that any hunt clubs would discontinue operations due to the incremental increase in flooding during the 5-year term of the special use permit is based on the following. First, properties in the Yolo Bypass are successfully managed in an environment with periodic flooding. Since 1996, the Yolo Bypass has flooded during 18 of 28 water years (64 percent) with a duration ranging from 4 to 106 days (see Environmental Assessment, Figure 1). Second, by limiting the term of the permit to 5 years, the accumulation of potential impacts from the potential incremental increase in flooding during operation of the Big Notch Project will be limited. Third, the payments received by landowners from DWR for the flowage easements will help offset costs associated with increased flooding. Finally, a component of DWR's adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW. Also, some of these gages will provide real-time information that will be made publicly available so hunt club operators can prepare for flooding events. In addition, see response to Glide In Ranch comment 1.

**Landowners-38:** Nor have the impacts of the as-yet clearly defined mitigation measures been studied to understand what impacts the mitigation measures themselves might have or how they alter cumulative impacts of the operation of the BNP. USFWS proposes to simply allow the project to operate and monitor to see what happens. This is not a true compatibility determination. It's a punt, and one that

risks the viability of hunt clubs upon whose management USFWS relies for the maintenance of the WMA. A full Environmental Impact Study (“EIS”) should be conducted to more specifically delineate and study the comprehensive impacts of the operation of the BNP with necessary mitigation measures in place.

**Response:** See response to Conaway 5. USFWS disagrees with the assertion that we are proposing “...to simply allow the project to operate and monitor to see what happens.” The compatibility determinations all include a stipulation to limit the term of the use authorized by the permit to a maximum of 5 years to minimize the likelihood that short-term impacts from increased flooding would have substantial adverse effects on the sustainability of existing privately managed wetlands with USFWS Conservation Easements. The USFWS Compatibility Policy specifically mentions temporal limitations as a potential tool for ensuring the compatibility of refuge uses (603 FW 2.12(11)). The special use permit will include a requirement for Reclamation and DWR to analyze impacts and begin to develop actions during the 5-year term of the permit to minimize the impacts of increased flooding and improve the sustainability of the managed wetlands. Furthermore, the USFWS has secured an agreement with BOR to facilitate the development, funding and eventual implementation of the priority actions that would minimize impacts to lands that have a USFWS conservation easement and improve their sustainability. The USFWS will work with the easement landowners and CDFW to create a holistic approach to implementing these minimization measures that maintain habitat for migratory birds and minimize impacts to landowners to utilize their properties as hunting clubs.

**Yolo-13:** The DU Analysis does not consider impacts or monitoring actions after March 15, despite continued Project operations. As the Draft EA acknowledges, “gate operations could continue through March 15” and “may remain partially open after March 15 to provide adult fish passage” at very low volumes, yet the scope of the Analysis was limited to November 1 through March 15.

As context, the March 15 end date for primary Project operations (up to approximately 6,000 cfs, per existing approvals) was intended protect agricultural operations by ensuring adequate time for field preparation and planting, including on the northern Swanston Ranch properties evaluated in the DU Analysis. The March 15 date is critical to maintaining agricultural productivity in the Yolo Bypass and the support it provides to millions of migratory waterfowl each year. The County understands other sources of waterfowl food, including watergrass, also depend on Spring drainage to germinate and will thus benefit from the March 15 end date restricting Project operations to prevent inundation outside of the Tule Canal and Toe Drain. Several studies reflect the conclusions set forth in this paragraph, including those posted on the County’s Delta e-Library web page (link in footnote 6).

In light of DU’s Analysis relating to the TUFLOW model and drainage, however, the County now questions the effectiveness of the March 15 date. If the Yolo Bypass cannot drain in a manner consistent with Project modeling, the Draft Compatibility Determination should evaluate the implications of later, delayed drainage on waterfowl habitat quality and food availability. Put another way, if the Yolo Bypass will drain more slowly than modeled and DWR operates the Project after March 15, further delaying drainage by using capacity in the Tule Canal and Toe Drain, the detriment to agriculture and other lands that provide food and habitat for waterfowl in the winter months must be evaluated.

**Response:** The subject of this EA is the Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives, which entails USFWS' issuance of a 5-year special use permit to DWR to increase frequency and duration of flows over our easements, not the operation of the Big Notch Project. Big Notch Project designs and any associated impacts, specific to the Yolo Bypass Salmonid Habitat Restoration and Fish Passage EIS/EIR, are under the purview of the federal lead, Reclamation, and state lead, DWR.

Operations of the Big Notch Project are described in Section 2.4.3 of the YBSHRFP EIS/EIR. Land use and Agricultural Resources impacts specific to the Big Notch Project of the YBSHRFP EIS/EIR are described in section 11.3.3.2.

We would direct Yolo County back to comment response Comment LA03-31 of the letter the County submitted on the EIS/R for additional information on drainage in the Tule Canal/Toe Drain and agriculture. Quoting from that response: "...The time it takes for water to drain off of the fields is simulated by the hydraulic model and does not account for the volume of water in the Tule Canal/Toe Drain."

All hydrology is connected in the TUFLOW model. If there is a decrease in elevation between two fields water will flow into the lower field. Additionally, if there is a decrease in elevation between a field connected to the Tule Canal that also will model water flowing from a field to the canal. Also, TUFLOW model was developed and calibrated to reflect actual drainage of the bypass by utilizing real measured flow and stage data across the model domain. While connectivity of drains in the bypass may not exactly match drain features of the fields; the operation of pumps, water control structures, and leaks cannot be captured by any single model as these features are subject to local land management operators to control at their discretion. The model assumes if a land manager needs to drain a field, they will operate local water control to do so and that overall conditions are captured in the real measured flow and stage data used to calibrate the model.

Finally, a component of the adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging station (DWR 2024). This information will allow for verification of modeling information from TUFLOW. Also, some of these gages will provide real-time information that will be made publicly available and maybe useful for water management by other interests in the Yolo Bypass.

As stated on EIS/R Section 24.4.3 of the EIS/R 'All gates would close when the river elevation falls below 14 feet.' Typically, this defined physical condition occurs on the Sacramento River annually in May/June. This EA is based on and tiers from the prior EIS/R analysis; therefore this specific condition defines when all flows through the gates cease.

## Model Issues

**Conaway-10:** The EA also relies on faulty modeling. The EA and its compatibility determinations rely on the 2024 Ducks Unlimited impact analysis, which in turn relies on critically flawed modeling. Ducks Unlimited used a model developed by Cbec Eco Engineering with several known deficiencies. Especially important here, the model treats areas as if they were "plumbed to drain" even though the necessary infrastructure for this plumbing does not exist. As explained in the draft compatibility determinations, "[t]hese [model] modifications likely have significantly increased the speed at which water moves across

the landscape,” which means affected areas will take longer to drain than the model indicates. The draft compatibility determinations then conclude that “[d]espite these limitations, the Cbec model was the best available to Ducks Unlimited at the time of the analysis.” However, this is incorrect.

Ducks Unlimited notes that a comparative model “would have provided additional insight into the importance that these different assumptions about drainage play within the project area,” likely improving the accuracy of its analysis, but that it “was unable to gain permission to release critical data to MBK to effectively re-run their model to then compare the two model outputs.” More accurate modeling using the “critical data” and comparative model identified by Ducks Unlimited must be performed, especially considering that, under the Proposed Action, flooding can occur past March 15, which is an intentional stop date to protect the viability of agricultural operations. Because the modeling relies on incorrect assumptions about drainage in the Project area, an issue key to understanding the Proposed Action’s impacts, the EA is inadequate.

**Response:** The USFWS is aware of the differences between the Cbec/TUFLOW and MBK models and the underlying assumptions regarding drainage. Both models oversimplify the drainage conditions in the Yolo Bypass. The hydraulic model developed by Cbec Eco Engineering used in this analysis utilizes a digital elevation model that was modified such that the wetland units and surrounding water control infrastructure are “plumbed to drain”. The MBK model takes a different set of assumptions when considering the drain-limited aspects of the Yolo Bypass and represents each wetland unit as a closed cell. Neither model reflects real-world conditions without calibration using data from past flood events.

DU described the challenges of using models to predict flooding patterns in a complex environment like the Yolo Bypass:

*As with any model, a simplified landscape had to be used to facilitate model construction and allow for reasonable processing times which ultimately limits the ability of these model results to fully represent current conditions within the study area. These simplifications make extrapolating model results to predict future conditions at the wetland unit level with a high degree of accuracy challenging, yet within-model comparisons between different wetland units and water years provide insight as to which regions are most impacted by different scenarios.*

Though a comparison of the TUFLOW and MBK models would have been insightful, the evaluation of the models at predicting flood depth and duration can only be achieved through calibration using other sources of data from past flood events, and ultimately comparing with real-world conditions. Master Response 2: Science Review Panel of the Final EIS/EIR describes the peer review of the information and work conducted to improve TUFLOW model data. DWR has worked to calibrate the TUFLOW model focusing on three hydrologic conditions in the Yolo Bypass to cover the range of flow conditions modeled during the 16 water years: high flow (1997 flood), low flow (flow within Tule Canal/Toe Drain channel capacity), and flood recession (recession of shallow flooding after March/April 2011 flood event). Information used to calibrate the model included gauge data (stage and flow), aerial photographs, and surveyed water surface elevations. Section 5.0 of the Hydrodynamic Modeling Report (Appendix D of the YBSHRFP Final EIS/R) provides a detailed description of the model calibration efforts and results. We are unaware of any similar efforts to calibrate the MBK model.

The results of the flood recession calibration are most relevant to the analysis of impacts on hunt clubs. In Appendix D of the YBSHRFP Final EIS/R, DWR describes the accuracy of the model at predicting the recession of shallow flooding after March/April 2011 flood event:

*The modeled wetted extents for the entire model domain were 10 percent (or a net 2800 acres) lower than observed, with the largest deviations occurring along Conaway Ranch and south of Lisbon Weir. The decreases in stage and wetted extents could be linked to the modeled flows being 775 cfs lower than measured on April 12, 2011 and a simplified drainage network that is perhaps too efficient at draining the Yolo Bypass.*

Based on this information, the USFWS concluded that the TUFLOW model, despite its limitations, provides the best available information on the impacts of the Big Notch Project operations on USFWS easement interests.

**Conaway-11:** Equally concerning is the scope of the data used by Ducks Unlimited for its modeling. Ducks Unlimited modeled impacts based on DWR's use over the 16-year period from 1996 through 2012. Evaluating the use under these limited conditions does not reflect the potential changes under the broader period of hydrologic record (which goes back more than 80 years), nor is there evidence that the modeling accounts for reasonably foreseeable future hydrology due to a changing climate. As such, the EA fails to capture the full range of possible effects in the Bypass. To adequately inform the compatibility determination—and the public—the analysis should be revised to include assessment of effects under both average near-term climate change and an extreme climate change condition to accurately depict the full extent of future climate scenarios. The analysis should clearly address the frequency of different water year types (from critically dry to wet), and how different hydrology and project operations and effects operate under extreme change compared to the historic period of record and near-term climate conditions.

**Response:** In EIS/R Section 4.4.1 Modeling Period of Record and Appendix D Hydrodynamic Modeling Report, describes why the 16 years of hydrologic record was used in the inundation model. Of the water years included in the model (1997-2012), 31 percent are classified as wet, 31 percent are classified as dry or critically dry, and 38 percent were classified as above or below normal.

The below text from that EIS/R section summarizes the reasons why TUFLOW Model used this set of data:

'As seen in Figure 4-7, the 16 years of data selected resemble a similar classification as the 44 years of historical data since Fremont Weir overtopping has been measured, suggesting that using the 16 years of data provides an appropriate surrogate for the longer-term record. Also, using the most recent 16 years of hydrology data would reflect recently built structures and recent operations of the system as well as relatively recent climate trends.'

Regarding analysis of climate change scenarios, see response to Landowners 29. It is also important to point out that the proposed special use permit would be limited to a maximum of 5 years, which limits exposure to hydrological conditions under future, more extreme climate change.

**Conaway-12:** USFWS is required to use reliable and accurate information “relevant to reasonably foreseeable significant effects,” assuming the costs of obtaining such information “are not unreasonable.” State agencies such as the State Water Resources Control Board now routinely insist that such analysis be included in joint documents prepared pursuant to CEQA and NEPA, including projects for which the Big Notch Project sponsors (Reclamation and DWR) are participants, such as the Sites Reservoir project. Reclamation itself has included it in its own NEPA analyses for federal and state water projects, demonstrating that such information is relevant, and failing to include it in NEPA documents is not reasonable.

**Response:** See response to Conaway 11.

**Conaway-16:** Also, as explained above, some of the modeling assumptions used by Ducks Unlimited, and relied upon in the draft compatibility determinations, are technically infeasible and inaccurate and result in a critically flawed determination. USFWS must determine if the Proposed Action is compatible with the mission or purpose of the Steve Thompson North Central Valley WMA. An action is compatible if the proposed use “will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge.” Here, as explained above, the actual proposed use has not been adequately evaluated, and therefore it is unknown if the Proposed Action will materially interfere with the WMA. The draft compatibility determinations must be reconsidered and revised based on accurate information that reflects the reasonably foreseeable effects of the proposed use.

**Response:** See responses to Conaway 10, Glide In Ranch 1, and Conaway 1.

**Landowners-1:** All compatibility determinations must include identification of the proposed use under consideration, as well as a description of “the nature and extent of the use,” including “the time of year . . . and duration of the use.” (603 FW 2.12A(a); (6), (6)(c).)

USFWS is poised to issue a 5-year special use permit (“Proposed Action”) to DWR to allow increased flows via operation of the BNP, pursuant to easements DWR seeks to condemn, over properties in the Yolo Bypass encumbered by USFWS conservation easements. The terms and conditions of the special use permit are proposed to include stipulations listed in the CDs. However, USFWS has failed to evaluate DWR’s actual proposed use. DWR’s proposed use is the right to flow a maximum of 6,000cfs every day from November 1 to March 15 over and upon lands encumbered by USFWS conservation easements. USFWS, via analysis by Ducks Unlimited (“DU”), did not review or analyze the likely impacts of proposed use under these parameters. Instead, USFWS has looked only at DWR’s historical use over a limited 16-year period from 1996 to 2012. DWR’s proposed use of the WMA is not limited to what occurred from 1996 to 2012. Therefore, USFWS’s analysis does not satisfy the requirements of 50 CFR 25.12.

**Response:** See responses to comment Conaway 1 regarding the scope of the proposed action and Conaway 11 regarding the period of record used in the TUFLOW model. Reviewing the 28-year period of record at Sacramento River stage levels at Fremont Weir, the hydrological conditions needed to result in a sustained 6,000 cfs flow from November 1 to March 15th (i.e. river stage of approximately 28 feet) have never occurred and are not reasonably foreseeable.

**Landowners-3:** What is clear from review of the EA and CDs is that further study is needed. DU was severely constrained in terms of time allowed to complete its work, and it was denied access to data and

available modeling. For these reasons, it was not able to supply reliable conclusions based on best available science. And DU's work is the sole support and foundation for the CDs. So, as the record stands, the CDs cannot be credibly asserted to be properly grounded in sound professional judgment.

**Response:** See response to Conaway 10.

**Landowners-8:** DU's work and the conclusions drawn by USFWS based thereon, are clearly not based on the best available science. DU has been significantly constrained by time pressure. And it has assessed impacts based only on averages over 16 years. DU has relied on a limited view of DWR's proposed use. DU has only looked at a small portion of the historic record without even attempting to estimate the impact of climate change.

**Response:** See responses to Conaway comment 10 regarding the DU's use of the Cbec model, Conaway comment 11 regarding the period of record used in the model, and Landowners comment 29 regarding incorporating climate change into modeling.

**Landowners-9:** The cbec/TUFLOW hydraulic model supplied to DU by DWR did not provide a means to utilize the best available science. DU has identified flaws in the exclusively utilized cbec/TUFLOW modeling it relied upon, including, most critically, dry ground and drainage assumptions/biases that resulted in understating the impacts. As a result of the flaws, the cbec/TUFLOW model was unable to adequately address the real movement of water during both flooding/flood up and draining.

With respect to flooding, the model assumes initial conditions are dry in the entire Bypass at the time of commencement of BNP operation. However, many wetland units and rice fields are annually flooded by October 2. Therefore, in the real world, flood depths will rise faster, leading to flooding earlier and for longer durations.

**Response:** See response to comment Conaway comment 10. USFWS has concluded that the TUFLOW model, despite its limitations, provides the best available information on the impacts of the Big Notch Project operations on USFWS easement interests. Ducks Unlimited's report has been revised to include more information on DWR's efforts to calibrate the TUFLOW model using real measured flow and stage data.

All hydrology is connected in the TUFLOW model. If there is a decrease in elevation between two fields, water will flow into the lower field. Additionally, if there is a decrease in elevation between a field connected to the Tule Canal, that also will model water flowing from a field to the canal. Also, TUFLOW models were developed and calibrated to reflect actual drainage of the bypass by utilizing real measured flow and stage data across the model domain. While connectivity of drains in the bypass may not exactly match drain features of the fields, the existence and operation of pumps, water control structures, and leaks cannot be captured by any single model as these features are subject to local land management operators to control at their discretion. The model assumes if a land manager needs to drain a field, they will operate local water control to do so and that overall conditions are captured in the real measured flow and stage data used to calibrate the model.

During the flood season, November 1 to March 15, DWR, as the operator of the Big Notch Project as described in Section 2.4.5 Monitoring and Adaptive Management of the YBSHFP EIS/EIR, will monitor the flows within the Tule Canal to minimize impacts to local land

management operators. Outside of the flood season, DWR, as described in Appendix C Adaptive Management Biological Goals (Section 5.4) of the YBSHFP EIS/EIR, will monitor the flows within the Tule Canal to minimize impacts to local land management operators. This will be completed as a component of the adaptive management plan to collect surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW. In addition, some of these gages will provide real-time information that will be made publicly available and may be useful for water management by other interests in the Yolo Bypass.

**Landowners-10:** Assumptions in the cbec/TUFLOW model are not realistic for flooding or draining. With respect to drainage, the model deviated from real world conditions. It assumed the wetland units and surrounding water control infrastructure are “plumbed to drain” with 50-foot-wide openings that don’t exist. As a result, the model has “significantly increased” the real-world speed at which water moves across the landscape, resulting in a bias in modeling results toward shorter durations of flooding than are actually likely to occur when operation of the BNP commences.

**Response:** See response to Conaway comment 10.

**Landowners-11:** Drainage is critically important because it impedes repairs, restoration, and maintenance of wetlands and farmed ground in the spring, which impedes effective and economic management, leading to the inability to maintain high quality food sources and crops in a sustainable manner for future waterfowl and crop seasons. DU recognizes that drainage is currently a challenge, but no solutions are offered to alleviate the impacts of the BNP’s certain exacerbation of drainage issues. And there has been a complete failure to consider the impacts of DWR’s continued flow of water in the Tule Canal after March 15. Drainage improvements on individual properties will not resolve the inability of the whole WMA to drain, particularly when even after March 15, the BNP will allow limited flows within the Tule Canal, on which properties in the WMA all ultimately drain. As long as DWR continues to flow water into the Tule Canal and keeps it at full capacity, those properties will not be able to drain, and the duration of flooding will exceed the projections of the cbec/TUFLOW modeling.

**Response:** See response to Landowner comment 9.

**Landowners-12:** In addition to these two primary flaws, there are other problems with the modeling. For example, one of three flood depths used by DU to calculate impacts to wetland infrastructure was berm elevation. For each wetland unit, DU used the maximum berm elevation to determine the number of times a wetland unit flooded. Flooding based on highest berm elevation is inadequate to evaluate impact to waterfowl habitat and makes it impossible to evaluate raising berms as a mitigation measure. And it is unclear how sensitive the three flood metrics used by DU are to this assumption.

**Response:** DU used the top of berm elevation as one of three depth categories used to capture impacts to managed wetland infrastructure, including berm integrity and water control structures. These structures are critical to the management of the wetland and can be severely damaged or destroyed when submerged if water exceeds target depths. To determine the water depth that would correspond to these impacts, DU used survey data collected between September 2023 and January 2024, to determine each wetland units’ maximum exterior berm elevation. The survey datum is NAD 83 CA Zone 2, NAVD 88 Geoid 18 with the basis of elevations being OPUS Solutions. This approach provided DU with a single

elevation value that corresponds to the highest elevation observed on the exterior berm. DU chose to use the maximum elevation as it was the most conservative way to estimate berm overtopping. Similar to the range seen in average blind elevation, the maximum berm threshold elevation had significant variation; however, the average difference between pond bottom elevation and maximum berm elevation was found to be approximately 38 inches.

**Landowners-13:** DU's analysis is not common, and there is no peer review of the model utilized. DU admits the model does not capture actual hydraulics. It further admits errors in survey calibration.

**Response:** See response to Conaway comment 10.

**Landowners-14:** The cbec/TUFLOW model was not the best available to DU. Other hydraulic models are available from MBK Engineers which assume a close cell assumption where wetlands units are not plumbed to drain. DU attempted to include this model in its analysis to, in its words, "create a more balanced approach to our analysis by comparing both model outputs," but DU was unable to gain permission from DWR to release critical data to MBK to effectively re-run their model.

USFWS was aware of the availability of MBK's model and its underlying assumptions, and the superior quality of analysis and greater accuracy of assessment of impacts that could be achieved by DU's use of MBK's model, but it chose not to support and facilitate the use of MBK model results. The credibility of the EA and CDs are severely undermined by the fact that DWR's contractor's model was the exclusive model allowed to be utilized by DU, that DWR was allowed to constrain DU's work to the degree it did, and that DWR's strong interest in a finding of compatibility is favored by the flaws in the cbec/TUFLOW model that result in underrepresentation of impacts. The EA and CDs are unavoidably infected with unacceptable bias.

**Response:** See response to Conaway comment 10.

**Landowners-15:** USFWS has admitted it lacks necessary data, and DU has recognized it lacked data to deliver reliable conclusions. Lack of data is the result of both a failure to provide DU enough time to complete a thorough study and denial of DU's access to available alternative modeling. DU was forced to rely exclusively on the cbec/TUFLOW model, which assumed free drainage through breaches in berms in wetland units that do not exist in the real world and an assumption that approximately 25,000 acre feet of water present within the study area prior to the addition of flow from the BNP would not be present, which again diverges from the real conditions on the ground. DU could have and should have utilized a second model by MBK, but DWR prevented it. As identified by DU, this would have yielded more accurate results. However, DWR hid data. It would not allow the other model to be used.

**Response:** See responses to Conaway 10 and Landowners 14.

**Landowners-16:** USFWS proposes to require DWR to implement measures to minimize impacts from the BNP and protect its conservation easement interests. However, it is not at all clear how implementation could possibly occur when mitigation measures have yet to be designed or funded, let alone account for time to construct any associated improvements. Nor has there been any study as to the effectiveness of these amorphous measures.

**Response:** See response to Conaway comment 5 and Glide In Ranch Comment 1.

**Landowners-26:** DU did not review, and USFWS has not considered, the impacts of water passing through the gates after March 15 for adult fish passage and its effect on drainage. DWR's proposed use includes the gates staying open for adult fish passage after March 15. Any additional water in Tule Canal will affect drainage of waterfowl habitat, and this was not considered since drainage was not properly analyzed by hydraulic model.

**Response:** See response to Landowners comment 11.

**Landowners-30:** A look at a mere 16 years of data does not capture variability and impact of the BNP on waterfowl habitat, and, more importantly, does not reflect DWR's proposed use. DU states that its results describe impacts under a "best case scenario". Landowners should be afforded analysis on a worst-case scenario— assuming the BNP is operated as DWR proposes – 6,000cfs every day from November 1 to March 15.

**Response:** See responses to Conaway 11 regarding the range of modeling years used and Conaway 10 regarding the appropriateness of the modeling scenarios used. Regarding the assertion that the analysis should include a worst-case scenario where 6,000 cfs flows into the bypass every day from November 1 to March 15, this is not a reasonably foreseeable scenario. CEQ regulations (40 CFR 1502.15) require agencies to "... use high-quality information, including reliable data and resources, models...to describe reasonably foreseeable environmental trends...". Under operations of the selected alternative in Reclamation and DWR's EIS/EIR, a flow of 6,000 cfs would require a Sacramento River stage of approximately 28 feet at the Fremont Weir (see Figure 2-10 on page 2-30) continuously for 5 ½ months. Such a scenario is extremely unlikely. As described in Conaway 11, the 16-year period of record included in the TUFLOW model represents the wide range of likely water year conditions.

**Glide in Ranch-7:** The DCDSUP has not adequately addressed the limitations of the hydraulic model as it relates to drainage and topography within the Central Area. To adequately address the impacts of the additional Project waters, the hydraulic model constraints/issues must be resolved.

**Response:** See response to Landowners 9.

**Glide in Ranch-8:** The DCDSUP does not address the limited capacity of the Toe Drain. All Easement Lands drain into the Toe Drain. The limited capacity of the Toe Drain must be analyzed and addressed. If not, any proposed mitigation projects will not have a material effect in protecting and preserving Easement Lands for waterfowl habitat. The additional Project water will not drain from Easement Lands until the Toe Drain elevation at Lisbon Weir is at 8'+/- or less.

**Response:** See response to Conaway 2.

**Yolo-1:** Notably, the Draft Compatibility Determination discloses—for the first time, to the County's knowledge—serious shortcomings in the TUFLOW model developed by Cbec Eco Engineering for other Project evaluations, including the Environmental Impact Statement/Environmental Impact Report (the "EIS/EIR") adopted in 2019 for the Project. The County recognizes that the EA relies heavily on cross-references to the Project EIS/EIR and that any final Determination constitutes a special use permit for Project operations. Because the Draft Compatibility Determination discloses deficiencies in the TUFLOW model and includes new information on related drainage and other Project impacts—including economic impacts due to greater delays in field access for agriculture—NEPA regulations appear to

require preparation of a Supplemental EIS. (40 Code Fed. Regs. § 1502.9(d) (stating supplement is required if “substantial new circumstances or information about the significance of adverse effects [arise] that bear on the analysis” in an EIS).

If the Service does not believe a Supplemental EIS is necessary, the County requests an explanation of this conclusion in connection with any action on the EA and Draft Compatibility Determination. Further, the County incorporates by reference the comments submitted separately by the Somach Simmons & Dunn law firm on behalf of Conaway Preservation Group. The County concurs with the positions expressed in that letter, including with respect to the sufficiency of the EA and the adequacy of the effects analysis in the EIS/EIR.

**Response:** The subject of this EA is the Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives, which entails USFWS' issuance of a 5-year special use permit to DWR to increase frequency and duration of flows over our easements, not the operation of the Big Notch Project. Big Notch Project designs and any associated impacts, specific to the Yolo Bypass Salmonid Habitat Restoration and Fish Passage EIS/EIR, are under the purview of the federal lead, Reclamation, and state lead, DWR.

See response to Conaway 10 regarding the appropriateness of the TUFLOW model for estimating flooding frequency and duration in the Bypass.

**Yolo-2:** DU analyzed the potential effects of Project operations in a report included as Attachment A (the “DU Analysis”) to the Draft Compatibility Determination. The DU Analysis indicates that DU used a TUFLOW model developed by Cbec Eco Engineering with various deficiencies, the most serious of which is that it treats modeled areas as if they were “plumbed to drain” even though the necessary infrastructure does not exist in the real world. As the Draft Compatibility Determination explains, “[t]hese modifications likely have significantly increased the speed at which water moves across the landscape” and affected areas will take longer to drain than the model indicates (DU Analysis at p. 7.) The Draft Compatibility Determination then concludes that [d]espite these limitations, the Cbec model was the best available to Ducks Unlimited at the time of the analysis.” (Id.) In its analysis, however, DU notes that an additional, existing model could have “provided additional insight” and potentially improved the accuracy of its analysis but “DU was unable to gain permission to release critical data to MBK to effectively re-run their model to then compare the two model outputs.” (Id. at p. 6.)

Under the Service’s compatibility guidelines (“Guidelines”), a compatibility determination must be based on “sound professional judgment,” which in turn requires consistency with “available science and resources.” (Guidelines Section 2.6.U.) And as noted above, the Project proponent agencies (DWR and Reclamation) have the legal burden to demonstrate compatibility and, in connection with this burden, to provide the Service with information necessary to support any such determination. Without more information as to why DU could not release information to MBK and benefit from its model, it is difficult for the County to assess whether the Draft Compatibility Determination meets these requirements. Further, the Draft Compatibility Determination does not explain why the Cbec model could not be modified within a reasonable timeframe—and prior to final action on the Draft Consistency Determination—to better reflect real world conditions.

If it is infeasible to take either of these actions now (i.e., to obtain the MBK model or modify the Cbec model and perform additional analysis), the Service should address the feasibility issue in any findings

adopted in approving the Determination and explain: (1) how the “sound professional judgment” standard is satisfied despite the model shortcomings; and (2) why it is reasonable to expect that “improved modeling” will be available within five years, as set forth in the “Justification” section of the Draft Compatibility Determination (pp. 12-13), even though neither DWR nor Reclamation directed work to improve the Cbec model over the many years that it has been available (and despite their reliance on the model for the EIS/EIR).

**Response:** See response to Conaway comment 10 regarding the suitability of the TUFLOW model for the analysis, and Landowners comment 14 regarding issues with the MBK model. Together, these responses explain how the TUFLOW model represents the best available information for the flooding impact analysis and satisfies the sound professional judgment standard. During the 5-year special use permit term, the USFWS will be able to assess the accuracy of the TUFLOW model by comparing it with real-world flood impacts during the initial operation of the Big Notch Project. This assessment will be useful for informing future compatibility determinations and NEPA analysis, as well as designing avoidance and minimization measures for hunt clubs.

### Availability of Resources (CD)

**Landowners-6:** Mitigation measures are identified as necessary for compliance with 50 CFR 26.41. But the CDs contains no recognition of these requirements, nor any evidence USFWS has considered the availability of adequate resources, has made efforts to secure them, nor that obvious deficiencies in resources can be remedied in a timeframe that would permit a finding of compatibility to support the Proposed Action.

**Response:** The final compatibility determinations each include two stipulations to ensure compatibility. The first is to limit the term of the special use permit to a maximum of 5 years. The second is to monitor how increased flooding impacts wetland units. The costs of implementing these stipulations are included in the compatibility determinations in the Availability of Resources sections.

The final compatibility determinations also include a commitment to work with landowners, Reclamation, and DWR, as described in response to Glide In Ranch Comment 1, to develop and implement measures to avoid or minimize effects of longer-term Big Notch Project operations on easement properties and support continued operations on the easement lands. Within the next 5 years, the USFWS and Reclamation will work with landowners to assess impacts and design these measures. As part of any future long-term permitting, FWS will complete necessary environmental compliance, and implement the projects. USFWS is entering into and implementing an agreement with Reclamation for up to \$18 million, subject to available appropriations, for the design and construction of actions to minimize impacts from the long-term operation of the Big Notch Project on USFWS easement interests. The USFWS further recognizes that DWR will be providing funding to landowners to address impacts of increased flooding frequency and duration. In addition, the USFWS would continue to work collaboratively with landowners that have USFWS Easements and the Yolo Wildlife Area, to create a holistic approach to maintain migratory bird habitat within the Yolo Bypass on CDFW lands and USFWS easement properties. The implementation of this holistic approach will ensure

the USFWS interests in these properties would continue to occur while maximizing, to the extent practicable, landowners' use of the properties.

**Landowners-25:** USFWS has not adequately addressed availability of resources – or, rather, the lack thereof. It must complete an “analysis of costs for administering and managing” DWR’s proposed use. (603 FW

2.12A(7)(a).) “Implicit within the definition of sound professional judgment is that adequate resources (including financial, personnel, facilities, and other infrastructure) exist or can be provided by the Service or a partner to properly develop, operate, and maintain the use in a way that will not materially interfere with or detract from fulfillment of the refuge purpose(s) and the System mission.” (603 FW 2.12A(7)(a).) “If adequate resources cannot be secured” to mitigate impacts of the proposed use, the use must be “found not compatible and cannot be allowed.” (603 FW 2.12A(7)(a).) Further: “Efforts to find additional funding must be documented on the compatibility determination form.” (603 FW 2.12A(7)(a).)

Absent demonstrated successful efforts by USFWS to secure necessary resources and secure assurances that such resources can be utilized in a timely fashion, it cannot find DWR’s proposed use compatible.

**Response:** See response to comment Landowners 6.

**Yolo-9:** The proposed stipulations do not discuss costs and other resources necessary to ensure compatibility. There are at least four deficiencies in this regard.

First, Table 2 in the Draft Compatibility Determination does not explain why monitoring costs are a one-time cost, with no annual recurring expenses. While this may reflect the DU suggestion of a remote-sensing monitoring program (DU Analysis, p. 14), it is not reasonable to expect that monitoring can be performed entirely remotely. At the very least, Service staff will have to review and analyze the data derived from remote sensing. Further, some amount of annual field work should also be included the discussion and stipulations to address the possibility that, among other things, a remote sensing program may not consistently provide sufficient data to evaluate changes in vegetation or potential violations of the stipulations.

**Response:** See response to comment Landowners 6. Monitoring is listed as a one-time cost because it would likely be awarded as an agreement or contract covering the term of the special use permit. The reoccurring annual expense amount under the staff time category includes the cost of overseeing the monitoring.

**Yolo-10:** Second, the Draft Compatibility Determination does not identify potential costs (or responsibility between DWR, Reclamation, and other entities) associated with the design and construction of the proposed “mitigation actions” referenced at p. 11 (and elsewhere) in the Draft Compatibility Determination. This information should be included in the final Determination, as the Guidelines require a Determination to include a description of “required and available resources” unless such description appears in adequate detail in an accompanying document (see Guidelines Section 2.12.A(7)). Ideally, this language would appear in the stipulations to ensure the proponent agencies—DWR and Reclamation—appropriately bear the cost burden and to demonstrate that the mitigation is feasible, which cannot be ascertained without information on the cost, funding source, or responsible party/ies.

**Response:** See response to Landowners comment 6.

**Yolo-11:** Third, the final Determination should also address long-term maintenance of such improvements. As DU states: “The proposed infrastructure improvements intended to mitigate the impact of the Project come with significant long-term management costs. DU suggests the establishment of a stewardship fund to generate annuity-like financing for future maintenance and replacement needs.” (DU Analysis at p. 15.) Yet while DU also says that it calculated a proposed endowment amount using a PAR analysis, no information about the endowment amount is included in any documents released by USFWS. The County submits that the Guidelines require this information to be set forth in the Determination and included in the stipulations.

**Response:** The final compatibility determinations have been revised to clarify that the avoidance and minimization measures are not stipulations required to find Big Notch Project operations under the 5-year special use permit compatible. However, the USFWS will include the requirement to plan and design these measures as a condition of the 5-year special use permit in anticipation of its future permitting actions concerning increased flooding of easement properties by long-term operation of the Big Notch Project. In addition, the Service is entering an implementation agreement with Reclamation to fund the design and implementation of these future measures. It is premature to calculate the cost of long-term cost of maintenance of any avoidance or minimization measure since the designs are still preliminary. The USFWS will consider the long-term cost of any avoidance or minimization measures in future National Environmental Policy Act compliance associated with future FWS permitting actions concerning increased flooding of easement properties by long-term operation of the Big Notch Project.

**Yolo-12:** Finally, the Guidelines require the Service to monitor the Project in a manner “...sufficient to evaluate compliance with stated conditions and swift action must be taken to correct or respond to any serious deviations.” (Guidelines, Section 2.12.A(11)(b).) The Draft Compatibility Determination, however, does not include any discussion of the resources necessary to enable the Service to ensure it can take “swift action,” if needed, to enforce any violation of the stipulations. This additional shortcoming should also be addressed in the final Determination.

**Response:** The Availability of Resources section in the compatibility determinations includes a reoccurring annual expense for refuge staff to oversee the use, including monitoring compliance with stipulations. In addition, the special use permit is limited in time to allow responses should conditions dictate; as such, the special use permit is authorized up to a maximum of 5 years.

## Monitoring

**Glide in Ranch-11:** The DCDSUP does not include the overall operations plan for the Project to include a monitoring component to ensure the Project will operate as permitted and is meeting Projects goals and objectives.

- The DCDSUP does not include a monitoring process to address real-time material Easement Land impacts/damages. This process should be accomplished by an independent monitor mutually selected by Easement landowners, USFWS, DWR, etc.
- The DCDSUP does not include any requirements for the Project operator to stop or throttle Project flows when/if Easement lands are being material damaged or the safety of the public is at risk.

- The DCDSUP does not define or discuss any landowner agreement(s) details, such as operations, maintenance, ownership, etc. that would be necessary for Project water mitigation projects on landowner properties.

**Response:** See Response to Yolo comment 11.

The Stipulations sections of the Compatibility Determinations include the specific actions that are required for the USFWS to find the issuance of the special use permit compatible. The stipulations include a commitment to monitor the effects of the Big Notch Project on an annual basis and review it within 5 years. The focus of the monitoring will be on how increased flooding impacts wetland units and modifies habitat conditions in novel ways through changes in vegetation communities. In addition, a component of DWR's adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW. Also, some of these gages will provide real-time information that will be made publicly available so hunt club operators can prepare for flooding events.

**Landowners-22:** With respect to monitoring called for over the five years: Who is going to do the monitoring? How frequently? Who will fund it? How will results be reported? And who will they be shared with? How frequently? What if after 5 years it is determined that an extension for another 5-year period should not be granted?

**Response:** The monitoring would likely be conducted by an outside entity with experience in designing and operating wetlands for migratory birds and funded by the Bureau of Reclamation. The results will be shared with the landowners and the public. Other details about the monitoring will be shared with the landowners as soon as they are available. Regarding the reevaluation of the use at the end of the 5-year term of the special use permit, the USFWS would prepare another compatibility determination to determine if continuation of the use is compatible.

### Stipulations/Mitigation

**Glide in Ranch-3:** The DCDSPU does not address GIR recovery of costs for damages incurred by Project waters to GIR property (roads, paths, swales, blinds, water control structures, debris removal, etc.) along with flood preparation/recovery expenses, etc. as a result of Project waters.

**Response:** Recovery of costs related to the increase in frequency and duration of flooding resulting from the project would come from two sources. First, landowners will receive payments from the State of California for the new flowage easements to be used to address impacts of flooding. Second, the USFWS is committed to working with DWR, Reclamation, and easement landowners to analyze impacts, monitor, and design measures to avoid and minimize those impacts. We are entering into and implementing an agreement with Reclamation for up to \$18 million, subject to available appropriations for this process. It is envisioned that implementation of measures will be part of our future compatibility determination considering long term impacts of flooding of increased frequency and duration from operation of the Big Notch Project

**Glide in Ranch-4:** The DCDSPU does not address the cost and recovery of GIR lost hunting days as a result of Project waters impact to access Easement lands and GIR blinds.

**Response:** See response to Glide In Ranch 3.

**Glide in Ranch-10:** The DCDSUP does not address Project operator notification requirements with Easement landowners and others. Notifications must include real-time Project operations, anticipated flows, timing of flows, etc.

**Response:** A component of DWR's adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW. Also, some of these gages will provide real-time information that will be made publicly available so hunt club operators can prepare for flooding events. If landowners observe unanticipated effects to fish or flows in the Yolo Bypass or would just like more information on Big Notch operations or on other DWR Yolo Bypass activities, please reach out to BigNotch@dwr.ca.gov. As part of the Adaptive Management Plan, this information may help optimize long-term Big Notch operations.

**Conaway-7:** However, instead of the EA including and analyzing any of the specific improvements that Ducks Unlimited has already formulated, the draft compatibility determinations mention only general measures . . . These generalized and vague measures included only in the compatibility determinations do not suffice. NEPA requires more.

**Response:** See response to Conaway comment 5.

**Conaway-15:** Furthermore, the requirements listed in the compatibility determinations' "Stipulations Necessary to Ensure Compatibility" present only vague descriptions of measures to prevent the Proposed Action from having adverse effects to habitat, wildlife, socioeconomics, and land use, and that would seemingly be implemented after the impacts of flooding have occurred. USFWS Compatibility Guidelines, however, require that stipulations be "detailed and specific" and include sufficient monitoring to evaluate compliance. These measures do not meet that criteria and must be better defined, better timed, and include monitoring provisions to ensure their efficacy. Importantly, they must be analyzed in the EA, not just briefly mentioned in attached draft compatibility determinations. Further, the impacts associated with these stipulated measures must be disclosed and considered in the compatibility determinations.

**Response:** See response to Yolo comment 11 regarding the specific stipulations included in the compatibility determinations. See response to Conaway comment 5 regarding the analysis of preliminary avoidance and minimization measures.

**Landowners-2:** The Proposed Action is issuance of a 5-year special use permit to allow DWR to operate the BNP, with no explanation offered by USFWS as to how or when any mitigation measures could be implemented or evidence that any such measures will be effective and will not themselves lead to undesirable impacts that detract from the mission of habitat preservation.

**Response:** See response to Yolo comment 11 regarding the specific stipulations included in the compatibility determinations. See the response to Landowners 36 and the Justification section

of the compatibility determinations for our rational for finding that the proposed action will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose of Steve Thompson North Central Valley Wildlife Management Area.

**Landowners-4:** If the BNP is ultimately to proceed, there must first be effective mitigation measures designed, planned, funded, permitted, and actually implemented before any increased flows are allowed. At this juncture, there has merely been identification of the need for mitigation measures, with no indication of any significant efforts to move toward vetting and implementation of such measures.

**Response:** See response to Conaway comment 5 regarding plans for planning, design, and permitting of the long-term measures and Glide In Ranch 1 regarding funding for the measures.

**Landowners-18:** 137 separate mitigation projects are proposed. However, these are vague and conceptual. Until and unless all mitigation measures are designed, planned, funded, permitted, and implemented/constructed, there is no way the BNP can operate in compliance with the CDs that are contingent upon implementation of the measures. Furthermore, until these mitigation measures are designed, they cannot be studied to determine the extent to which they reduce the impact of the BNP, if at all.

**Response:** The final compatibility determinations have been revised to clarify that the avoidance and minimization projects are not included as stipulations needed to find the operation of the Big Notch Project compatible for the 5-year term of the special use permit. See the response to Landowners comment 36 and the Justification section of the compatibility determinations for our rational in making that determination.

However, the USFWS has included the requirement to analyze impacts and develop measures to address those impacts as a condition of the 5-year special use permit in anticipation of implementation as part of long-term operation of the Big Notch Project. In addition, the Service is entering an implementation agreement with Reclamation to fund these measures. See response to Conway comment 5 regarding plans for design and environmental compliance for these measures.

**Landowners-20:** No analysis is shown. How mitigation measures will reduce impact is not shown. For example, DU has recommended improvements to “access road and berm improvements to support winter access and more predictable road conditions,” but without elevating the road access and/or wetland berm elevations, how will this mitigation measure mitigate for the higher frequency of flooding?

The mitigation measures have simply not been studied. How will the mitigation measures be designed? How and when will they be permitted? How will they be funded? How will they be maintained? Who will construct and maintain them? When will they be constructed?

**Response:** See response to Conaway comment 5 regarding plans for planning, design, and permitting of the long-term measures and Glide In Ranch 1 regarding funding for the measures.

**Landowners-21:** Mitigation measures are subject to additional environmental compliance. What happens if they don't pass muster? What if they are not ultimately approved? What if they are never

funded? What if no one maintains them? Even if they are constructed and maintained, to what extent do they mitigate? And what about the remaining impacts they do not alleviate?

**Response:** See response to Conaway comment 5 regarding plans for planning, design, and permitting of the long-term measures and Glide In Ranch 1 regarding funding for the measures. The USFWS will evaluate the impacts of increased flooding and minimization and avoidance measures before permitting long-term operation of the Big Notch Project in a manner that affects our easement interest.

**Landowners-23:** Answers to all of these critical questions must be satisfactorily supplied before USFWS can credibly make a determination of compatibility. No mitigation measures have been simulated in any hydrologic model to determine if they would quantitatively reduce the magnitude of impacts. Moreover, the analysis assumes mitigation measures will be in place that clearly will not exist, and no analysis has been completed of the unmitigated operation of the BNP. And the degree of impacts identified and described is a best-case scenario. Analysis needs to be done of the worst-case scenario to legitimately understand the risk that waterfowl habitat and farmland will be compromised by operation of the BNP.

**Response:** The analysis in the Final EA and compatibility determinations does not assume that the avoidance and minimization measures are in place. During the 5-year term of the special use permit, the USFWS will work with landowners, DWR, and Reclamation to design and develop measures which will be considered in permitting and NEPA analysis for any request for a long term permit. See response to Conaway comment 5.

**Landowners-24:** Moreover, more mitigation measures are needed. Chief among them: There must be a system for providing notification to the Owners when the BNP will operate. The Owners must have advance notice to take defensive measures of moving equipment and people. Additionally, a long-term maintenance fund is needed, as identified by DU, which has not been addressed in the CDs. DU indicates that establishment of a stewardship fund is critical to addressing “significant long-term management costs.”

**Response:** See response to Glide In Ranch comment 10 regarding efforts to inform landowners regarding Big Notch operations.

**Landowners-28:** USFWS needs to better define how properties are to be repaired after flooding, and the preparations that will be required for next waterfowl season in order to adequately estimate additional time and level of effort that BNP will add.

**Response:** Per the terms of each easement, the landowners are responsible for management, maintenance, and repair of their infrastructure. That said, the USFWS is committed to working with landowners, DWR, and Reclamation to develop and implement actions to minimize impacts of the Big Notch Project on hunt clubs with USFWS easements. See response to Conaway comment 5.

**Yolo-3:** Further, the Service should strongly consider revising the proposed stipulations to specifically require improvements to the TUFLOW model to ensure that it meets expectations when the Determination is reevaluated. Even if it may be justifiable to rely on the TUFLOW model results in adopting a Determination in the near future, the County is skeptical that the “sound professional

judgment” standard could be satisfied in five years if the model is not substantially improved (as the Service anticipates). The stipulations should compel this outcome.

**Response:** See response to Conaway comment 10 regarding the suitability of the TUFLOW model for estimating the incremental increase in the frequency and duration of flooding under the Big Notch Project. Monitoring implemented during the 5-year term will be used, if appropriate, to improve the accuracy of flooding projections.

**Yolo-4:** Rather than discuss the possibility of limiting Project operations during the initial five-year term, the Draft Compatibility Determination prescribes only monitoring and infrastructure improvements to limit (but not fully avoid) the potential detriment to Service easements from Project operations. This narrow approach does not appear to satisfy the Guidelines, which broadly require compatibility determinations to:

...specify the manner in which the use must be carried out to ensure compatibility. Stipulations must be detailed and specific. They may identify such things as limitations on time (daily, seasonal, or annual) or space where a use could be safely conducted, the routes or forms of access to be used, and any restrictions on the types of equipment to be used or number of people to be involved. (Guidelines, Section 2.12.A(11)(b), emphasis added.)

The County is baffled by the lack of discussion about limiting Project operations during the initial five-year term. To minimize drainage-related impacts on its easements, the Service could require DWR to “go slow” with initial Project operations and operate at less than 6,000 cfs or cease operations prior to March 15, or both, at least in the initial year or two of operations. Yet the Draft Compatibility Determination instead opts for an observational approach in the apparent hope that conflicts will not be severe enough to jeopardize waterfowl habitat quality or substantially impair other environmental and recreational interests protected by the Service easements. At the very least, if it adopts the Determination the Service should explain why these strategies were dismissed as feasible options.

**Response:** The USFWS disagrees with the assertion that the stipulations are not consistent with the Compatibility Policy (603 FW 2). Both stipulations are sufficiently detailed and specific enough to be clearly implemented. The final compatibility determinations have been revised to clarify that the avoidance and minimization measures are not stipulations required to find Big Notch Project operations under the 5-year special use permit compatible. However, the USFWS has included the requirement to plan and design these measures as a condition of the 5-year special use permit in anticipation of long-term operation of the Big Notch Project. In addition, the Service is entering an implementation agreement with Reclamation to fund these measures.

Regarding the commentor’s suggestion to limit Project operations during the 5-year term of the special use permit, the USFWS believes limiting Project operations is unnecessary to find the use compatible. In addition, limiting operations would hamper DWR and Reclamation’s ability to meet their obligations under the Endangered Species Act for the Long-Term Operations of the Central Valley Project and State Water Project (NMFS 2009).

**Yolo-5:** Finally, with regard to the volume of Project flows, the Project headworks is capable of conveying far more than the 6,000 cfs mentioned in the Draft Compatibility Determination. Modeling performed for DWR following Project approval indicated that the headworks can convey between

12,000-14,000 cfs.<sup>3</sup> While DWR has not indicated any present intention to operate the Project significantly beyond 6,000 cfs, recent drafts of the Project “adaptive management plan” state that expanded operations—including flows well beyond 6,000 cfs and past March 15—could be implemented in the future.<sup>4</sup> For at least this reason, DWR’s pending eminent domain actions seek flowage easements that authorize flooding up to 12,000 cfs and through “late spring.”

The Draft Compatibility Determination does not include any of the foregoing information, nor does it address the potential for related changes in Project operations. The County encourages the Service to include this information in the Draft Compatibility Determination and consider whether it is necessary and appropriate to include an additional stipulation expressly limiting Project operations to approximately 6,000 cfs through no later than March 15, at which point operations must ramp down consistent with the EIS/EIR (i.e., to avoid Project operations that cause inundation after March 15). Such a stipulation appears necessary under Guidelines Section 2.12.A(11)(b), which states that “[p]rotective stipulations in the compatibility determination for a particular use should specify the manner in which that use must be carried out to ensure compatibility.”

**Response:** See response to Conaway comment 1. The scope of refuge uses authorized under special use permits is limited to the scope of the use evaluated in the compatibility determinations (see “How would the use be conducted?”). The National Wildlife Refuge System Administration Act, as amended, states that “...the Secretary shall not initiate or permit a new use of a refuge or expand, renew, or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety.” (16 USC§668dd(d)(3)(A)(i). Since the scope of the permitted operations is already limited to the flowage and period of use, an additional stipulation limiting expansion of flows is unnecessary.

**Yolo-6:** Stipulations 2-3 are far too vague to meet the “detailed and specific” standard set forth in the Guidelines at Section 2.12.A(11)(b), quoted above. For example, Stipulation 2 describes two general categories of mitigation:

- a. Improvement of drainage infrastructure (water control structures, ditches) to increase the speed at which water elevations in the wetland units can be returned to desired management conditions after flood events.
- b. Improvements to access roads and berms to support winter access and more predictable road conditions. (Draft Compatibility Determination at p. 12.)

In the absence of any performance criteria or other standards, these requirements are far too vague to “ensure compatibility” of the proposed use, as the Guidelines require. For example, in Stipulation 2.a, to what extent must the drainage infrastructure improvements “increase the speed” of drainage to satisfy this stipulation? What are “desired management conditions”? How does the reference to “flood events” relate to Project operations, which are not “flood events” in any ordinary sense. These are among the issues that render Stipulation 2.a too vague to meet the “detailed and specific standard.”

**Response:** See response to Yolo comment 4. The final compatibility determinations have been modified to clarify that the referenced measures are not stipulations, nor are they necessary to find the proposed use compatible.

**Yolo-7:** For the same reasons, Stipulation 2.b is also deficient. What level of “winter access and more predictable road conditions” is the target? Is the goal to ensure no loss of hunting days, or is some loss of access acceptable? The Service should provide more “detailed and specific” objectives to address these deficiencies. And finally, Stipulation 3 needs more detail on monitoring to be performed and should not be limited in scope to “changes in vegetation communities,” but should more holistically consider the conservation values of the Service easements and how potential Project impacts should be assessed once operations commence.

**Response:** See response to Yolo comment 6.

**Yolo-8:** In considering changes to the stipulations, the County encourages the Service to review the Yolo County Agricultural Drainage Improvement Plan 2020 Update (“Study Update”).<sup>6</sup> Yolo County prepared the Study Update to identify specific drainage and water infrastructure improvements within and directly adjacent to the Yolo Bypass that would benefit farmers and wetland managers. The Study Update reflects significant stakeholder outreach and focused on the development of detailed project sheets, ultimately identifying 91 preliminary project concepts. In particular, the Swanston Ranch Master Project (Study Update, p. 22) includes elements suitable for consideration in connection with the stipulations, including implementation of a combination of drainage and conveyance capacity improvements to enhance habitat and wildlife-friendly agriculture, address drainage challenges, and minimize impacts of increases in the frequency and duration of flows in the Tule Canal and Yolo Bypass.

**Response:** The USFWS appreciates Yolo County’s effort to share this useful reference.

### Compatibility Justification

**Glide in Ranch-5:** The DCDSPU does not describe any definitive professional judgement criteria or available science data to support USFWS compatibility determination that habitat requirements for out migrating juvenile winter run salmon is compatible with waterfowl habitat for migrating birds.

**Response:** The Justification section for each compatibility determination explains the rationale for finding the use compatible. See responses to Glide In Ranch comment 1 and Landowners comment 36.

**Glide in Ranch-6:** The OCDSPU has no measurable thresholds to determine compatibility.

**Response:** Measurable thresholds for determining compatibility are not required by law (16 USC§668dd(d)), regulation (50 CFR 25.21), or policy (603 FW 2). 50 CFR 25.12 defines a compatible use as “...a proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge.”

**Landowners-7:** Significant impacts of the Project are acknowledged by DU and USFWS. The BNP operations would increase the frequency, duration, and severity of flooding beyond the scope of existing DWR flowage easements. Due to the increased duration and frequency of flows, and flooding at greater depths, the Proposed Action will impact wetland management actions conducted by private land managers, and despite the fact that it recognizes “mitigation actions are required,” it is nonetheless proposing to allow the BNP to operate when such mitigation actions remain “broad in in scope and not fully defined” and not yet vetted for environmental compliance.

USFWS has assumed without basis in any facts, data, or economic analysis, that management actions will not become so expensive and time-intensive, and the costs associated with maintaining water management infrastructure required for seasonal wetlands will not increase so greatly, that hunt club owners will determine the costs of operation and maintenance outweigh the benefits. USFWS is banking on hunt clubs shouldering the burden, costs, uncertainties, and risk over the next 5 years rather than shutting down operations. This is an irresponsible gamble. As USFWS acknowledges, if a hunt club discontinues operations, the critical wetlands values protected by the conservation easements would be lost, and migratory bird habitat quality and availability in the Yolo Basin would suffer, and loss of habitat value could negatively affect the waterfowl food supply and carrying capacity within the Yolo Basin, which would materially detract from the purposes the WMA was established for.

**Response:** Big Notch Project designs and any associated impacts, specific to the Yolo Bypass Salmonid Habitat Restoration and Fish Passage EIS/EIR, are under the purview of the federal lead, Reclamation, and state lead, DWR. The Proposed Action described in Section 1.2 Proposed Action and Section 3.2. Alternatives, entails USFWS' issuance of a special use permit for a maximum of 5 years to DWR to increase the frequency and duration of flows over USFWS easements, not the operation of the Big Notch Project.

Our rationale for concluding that it is unlikely for any hunt clubs to discontinue operations due to the incremental increase in flooding during the 5-year term of the special use permit is based on the following. First, properties in the Yolo Bypass are successfully managed in an environment with periodic flooding. Since the water year 1997, the Yolo Bypass has flooded during 18 of 28 water years (64 percent) with a duration ranging from 4 to 104 days. Second, by limiting the term of the permit to a maximum of 5 years, the accumulation of potential impacts from the incremental increase in flooding during operation of the Big Notch Project will be limited. Third, the payments to be received by landowners for the flowage easements will help offset costs associated with increased flooding. Finally, a component of DWR's adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). Some of these gages will provide real-time information that will be made publicly available so hunt club operators can prepare for flooding events.

USFWS recognizes the impacts of increased flooding over the long term on hunt club infrastructure and operations and is committed to working with DWR, Reclamation, and easement landowners to implement measures to avoid and minimize those impacts. The limited 5-year term of the special use permit will allow USFWS to evaluate how the Big Notch Project operations increase the duration and frequency of flooding on easements, as well as plan and design necessary measures to minimize potential impacts. Prior to the end of the 5-year term, the USFWS will reevaluate the compatibility of the increased flows with the implementation of specific measures to avoid and minimize those impacts over the longer term.

**Landowners-17:** In other words, USFWS proposes to allow the BNP to operate first and analyze compatibility later. Even after recognizing that operation of the BNP without the mitigation measures in place would be an incompatible use.

**Response:** See response to comment Landowners 38.

**Landowners-32:** We now know from DU's report that there will be impact. We also know, because DU's report explicitly states it, is that the impacts identified underrepresent the full scope of impacts that will actually be caused by operation of the BNP. DU acknowledges that "proposed improvements are not likely adequate to fully offset additional flooding resulting from the operation of the Big Notch Project," and it recommends a more refined hydraulic model to reduce the degree of uncertainty. Despite this, and without explanation of the relationship of the impacts described by DU therewith, USFWS proposes to find BNP operations compatible. How? What impact metric and magnitude of each metric was used by USFWS to determine compatibility? What are the criteria that USFWS has used to come to the conclusion of compatibility even though it admits that impacts to waterfowl habitat will occur annually and increase over time? These are not identified.

**Response:** A compatible use is "... a proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge (50 CFR § 25.12(a)). The USFWS compatibility policy states that "... the fact that a use will result in a tangible adverse effect, or a lingering or continuing adverse effect is not necessarily the overriding concern regarding "materially interfere with or detract from." These types of effects should be taken into consideration, but the primary aspect is how does the use and any impacts from the use affect our ability to fulfill the System mission and the refuge purposes..."603 FW 2.11(2).

With respect to the impact of flooding on the hunt clubs, our compatibility analysis was focused on whether increases in flooding during the 5-year term of the special use permit would likely lead to hunt club owners ceasing operations of their wetland units. Our analysis focused on the change in the number, duration, and depth of flood events in the Yolo Bypass compared to the baseline. Under baseline conditions, flooding in the wetland units with USFWS easements that exceeds 6 inches above management targets totals an average of 25 days annually. Flooding at that depth or greater decreases waterfowl and other migratory bird use (Taft et al. 2002; Baldassarre and Bolen 2006; Baschuk et al. 2012) and hunting quality. With implementation of the Big Notch Project, flooding in these same units that exceeds 6 inches above management targets would increase by an average of 7 days or 28 percent annually.

To determine if the increased flooding during the next 5 years would likely cause hunt clubs to cease operations, we reviewed the status of clubs during past periods of increased flooding in the Yolo Bypass. Most of the Steve Thompson North Central Valley WMA easements within the Yolo Bypass were acquired in either 1997 or 1999. Water years 1997 through 2000 were all classified as either wet or above normal years (DWR 2019, DWR n.d.). The Yolo Bypass flooded during each of these water years, with the Sacramento River exceeding the crest elevation of Fremont Weir and spilling into the Yolo Bypass for at least one month and up to three months in each water year. Despite this increased level of flooding, the hunt clubs demonstrated resilience and continued to operate.

Our compatibility determinations show that while increased flows under the Big Notch Project could affect our easement interest, the effects would not rise to the level of materially interfering with or detracting from the refuge purposes or Refuge System mission during the 5-year term of the special use permit. By limiting the term of the permit to a maximum of 5 years,

we can assess the accumulation of potential flooding impacts and determine how those impacts may be minimized.

**Landowners-33:** The science behind evaluation of Proposed Action and impacts leading to a compatible finding is not described. This is greatly concerning because DU has explicitly “advised that any conclusions drawn from [its] analysis be approached with caution and validated through alternative means or expert consultation.” USFWS has not exhibited such caution. There is no indication that the CDs are supported by validation through any alternative means or expert consultation.

**Response:** The analysis in the compatibility determinations and Environmental Assessment was based on the report prepared by Ducks Unlimited entitled “Yolo Bypass USFWS Easements – Impact Analysis for the Big Notch Project” (Ducks Unlimited 2024). Ducks Unlimited used the TUFLOW hydraulic model developed by Cbec Eco Engineering in its analysis of flooding impacts. In its final report, Ducks Unlimited states:

*As with any model, a simplified landscape had to be used to facilitate model construction and allow for reasonable processing times which ultimately limits the ability of these model results to fully represent current conditions within the study area. These simplifications make extrapolating model results to predict future conditions at the wetland unit level with a high degree of accuracy challenging, yet within-model comparisons between different wetland units and water years provide insight as to which regions are most impacted by different scenarios.*

Though the TUFLOW model oversimplifies the landscape, it’s important to note that DWR worked to calibrate the model focusing on three hydrologic conditions in the Yolo Bypass to cover the range of flow conditions modeled during the 16 water years: high flow (1997 flood), low flow (flow within Tule Canal/Toe Drain channel capacity), and flood recession (recession of shallow flooding after March/April 2011 flood event). Information used to calibrate the model included gauge data (stage and flow), aerial photographs, and surveyed water surface elevations. Section 5.0 of the Hydrodynamic Modeling Report (Appendix D of the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Final EIS/R 2019) provides a detailed description of the model calibration efforts and results.

Based on the Ducks Unlimited report and DWR’s Hydrodynamic Modeling Report, the USFWS concluded that the TUFLOW model provides the best available information on the impacts of the Big Notch Project operations on USFWS easement interests.

The final compatibility determinations all include a stipulation which will be included as a condition in the special use permit to monitor the effects of the Big Notch Project on an annual basis and reviewed within 5 years. The focus of the monitoring will be on how increased flooding impacts wetland units and modifies habitat conditions in novel ways through changes in vegetation communities.

Additionally, a component of DWR’s adaptive management plan is the collection of surface water information throughout the Yolo Bypass through additional gaging stations (DWR 2024b). This information will allow for verification of modeling information from TUFLOW.

**Landowners-37:** DU states concern that compatibility should be reviewed annually, not just every 10 years. This concern was not reflected in the compatibility determination. USFWS compatibility determination includes indication that impacts to easement properties will increase over time, and limits approval for 5 years. But how can it conclude that BNP will be compatible for those 5 years? The 5-year limited scope of approval is itself a clear indication that, at best, USFWS has no idea whether it will be compatible. And if, after 5 years, the BNP cannot be made compatible with the USFWS easements, then what?

**Response:** Stipulation 2 in the final compatibility determinations has been revised to reflect that the effects of the Big Notch Project will be monitored and reviewed on an annual basis. Reevaluation of the compatibility determination will occur no more than 5 years after the special use permit is issued and may occur earlier if circumstances so require.

**Landowners-39:** Yet USFWS proposes to hasten and bypass any meaningful analysis of the full scope of impacts of the BNP while continuing to kick the can down the road on addressing the clear negative impacts of the BNP that it admits must be mitigated to truly ensure compatibility. Large swaths of property subject to USFWS's conservation easements may be lost as viable habitat due to impacts identified by DU and acknowledged by USFWS. A full and accurate analysis, using the best available science, must be completed before final compatibility determinations can be issued. It is clear this has not occurred. Mitigation actions contemplated are broad in scope and not fully defined. Environmental review cannot be put off to some point in the future while the BNP is allowed to operate. Irreparable harm will be done if USFWS allows DWR to proceed with the BNP absent the completion of a full environmental review and true development and implementation of properly studied proposed mitigation measures that can reasonably be expected to mitigate impacts.

**Response:** See response to Conaway comment 1 regarding the scope of the proposed action analyzed in the compatibility determinations. As described in the response to Yolo comment 4, the compatibility determinations thoroughly analyze the impacts of the proposed action and include stipulations needed to ensure the use is compatible during the 5-year term of the special use permit. The purposes of limiting the term of the special use permit to a maximum of 5 years rather than the standard 10-year reevaluation period are twofold. First, the shorter time frame will allow the USFWS to work with landowners to assess impacts and develop measures to avoid and minimize impacts of increased flooding duration and frequency on FWS easement properties before considering issuance of a long-term permit to DWR. Second, by limiting the term of the permit to a maximum of 5 years, the accumulation of potential impacts from the incremental increase in flooding will be limited. USFWS will work with landowners and the Yolo Wildlife Area to create and implement a holistic approach to maintain migratory bird habitat within the Yolo Bypass on CDFW lands and USFWS easement properties. The implementation of this holistic approach will ensure the USFWS interests in these properties would continue to occur while maximizing, to the extent practicable, landowners' use of the properties.

## NEPA Adequacy

**Conaway-13:** The EA's analysis is inadequate and does not comport with NEPA requirements.

Federal agencies must undertake a "full and fair" analysis of the environmental impacts of their activities, and NEPA imposes procedural requirements designed to force agencies to take a "hard look"

at environmental consequences of their proposed actions. [Citation.] To satisfy the “hard look” requirement, an agency must provide “a reasonably thorough discussion of the significant aspects of the probable environmental consequences.”

USFWS cannot segment and defer critical analysis or underpin analysis with faulty modeling. By failing to discuss feasible and available mitigation measures and their impacts, and by relying on faulty and incomplete modeling, the EA has not taken the requisite hard look at the “probable environmental consequences” of the Proposed Action.

**Response:** See response to Conaway comment 5.

**Conaway-17:** An EIS is required here for several reasons. The 2019 EIS/EIR upon which the EA relies is insufficient for purposes of any future discretionary approvals by USFWS, Reclamation, DWR, or any other state or federal agency. It neither describes nor analyzes the Big Notch Project as it has been constructed. USFWS “must determine that the analysis and assumptions used in the referenced document are appropriate for the analysis at hand.” Because USFWS cannot make that determination, it must prepare at least a supplemental EIS for the action proposed here.

Further, NEPA mandates that agencies:

Shall prepare supplements to . . . final environmental impact statements if a major Federal action is incomplete or ongoing, and: (i) The agency makes substantial changes to the proposed action that are relevant to environmental concerns; or (ii) There are substantial new circumstances or information about the significance of adverse effects that bear on the analysis.

Both of these criteria are triggered here, as the substantial changes to the Big Notch Project by DWR, and the proposed substantial changes discussed in the EA (up to 137 different but unstudied mitigatory improvement actions), are directly relevant to environmental concerns and constitute substantial new circumstances or information that bear on the adequacy of the 2019 EIR/EIS analysis. And due to the consequential effects of the Proposed Action on the environment and economy of Yolo County, the purposes of NEPA will be furthered by preparing a supplemental EIS.

**Response:** See response to Conaway comments 1 and 5.

**Conaway-18:** Lastly, “the amount of controversy associated with a proposal can help you to decide the appropriate level of NEPA documentation. If the proposed action will have a significant impact on the human environment or will be controversial, an EIS is required.” Unequivocally, the Proposed Action is controversial. It is only required because of the Big Notch Project, which is the subject of several ongoing CEQA actions and 45 pending eminent domain cases. Also, the Proposed Action will likely result in “a significant impact on the human environment” that is unrecognized in the EA because it did not analyze and mitigate for the complete action, inclusive of additional facility improvements that could result in significant effects. DOI NEPA regulations require preparation of an EIS “for each proposed major Federal action significantly affecting the quality of the human environment before making a decision on whether to proceed with the proposed action.” USFWS must prepare an EIS here.

**Response:** The USFWS disagrees that an EIS is necessary. First, commenter appears to confuse the proposed action at issue here, which is flooding of increased duration and frequency on USFWS easements, with the overarching Big Notch Project. Reclamation and DWR have already

prepared and finalized an EIS/EIR for the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. The EA for this proposed action tiers from EIS/EIR. The EIS's analysis of flooding-related impacts to recreational resources throughout the Project area—including the areas with USFWS Conservation Easements—complies with NEPA. And the EIS/R explicitly acknowledges the potential for negative impacts on hunting clubs and managed wetlands (see Sections 16.3.3.2 - Socioeconomics, and 13.3.3.2 – Recreation). Second, the USFWS disagrees with the assertion that the proposed action would result in significant impacts. The Finding of No Significant Impact includes our rationale for determining that no significant impacts are anticipated, and the EA adequately analyzes the impacts of the increased duration and frequency of flooding on USFWS easements. Third, while the USFWS acknowledges that the Big Notch Project may be considered controversial, the Proposed Action entails USFWS' issuance of a 5-year special use permit to DWR to increase the frequency and duration of flows over USFWS easements, not the operation of the Big Notch Project.

### Opposition to Proposed Action

**Landowners-5:** Given this reality, Owners strenuously object to the Proposed Action and urge USFWS, for the time being, to abandon the proposal to grant any permit or approval to DWR for the BNP until such time as an appropriate scope of environmental review and planning can be accomplished to ensure habitat is not compromised in the name of expediency.

**Response:** Comment noted.

### Support for Proposed Action

**Conaway-19:** CPG supports efforts to improve conditions for salmonids and does not oppose the Proposed Action.

**Response:** Comment noted.

## References

- Baldassarre, G.A. and Bolen, E.G. 2006. Waterfowl Ecology and Management. 2nd edition. Krieger Publishing Company, Malabar, FL, USA. 576 pp.
- Baschuk, M.S., Koper, N., Wrubleski, D.A., & Goldsborough, G. (2012). Effects of Water Depth, Cover and Food Resources on Habitat use of Marsh Birds and Waterfowl in Boreal Wetlands of Manitoba, Canada. *Waterbirds*, 35(1), 44–55. [BioOne Digital Library: Baschuk et al. Waterbirds: 1 March 2012](#)
- Council Environmental Quality (CEQ). National Environmental Policy Act (NEPA) Final Guidance, Effective Use of Programmatic NEPA Reviews, 79 FR 76986, December 18, 2014. [Federal Register : Final Guidance for Effective Use of Programmatic NEPA Reviews](#)
- California Department of Water Resources (DWR). 2013. Parcels in Yolo Bypass. (AR0164498). 2013.
- California Department of Water Resources (DWR). 2021. Technical Memorandum: Yolo Bypass TUFLOW Model Updates and Calibration. 12/22/2021.
- California Department of Water Resources (DWR). 2022. Memorandum: Assessments of Seepage and Landside Slope Stability Analyses Results of the Existing Yolo Bypass East Levee, Yolo Bypass Salmonid Habitat Restoration and Fish Passage (Big Notch) Project.
- California Department of Water Resources (DWR). 2024a. Addendum #2 to the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project Final Environmental Impact Report (State Clearinghouse No. #2013032004). February 28, 2024
- California Department of Water Resources (DWR). 2024b. Adaptive Management and Monitoring Plan. June 2024.
- California Department of Water Resources (DWR). n.d. Chronological Reconstructed Sacramento and San Joaquin Valley Water Year Hydrologic Classification Indices. [California Data Exchange Center of the California Department of Water Resources: Water Year Hydrologic Classification Indices](#)
- Ducks Unlimited. 2024. Yolo Bypass USFWS Easements – Impact Analysis for the Big Notch Project. Ducks Unlimited Western Regional Office, Rancho Cordova, CA. Prepared for the United States Fish and Wildlife Service and Bureau of Reclamation.
- National Marine Fisheries Service (NMFS) Southwest Region. 2009. Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project. June 4, 2009. *Swanston Ranch Owners Association v. California Department of Water Resources*. 2022. Respondent DWR’S Opposition to Petitioner’s Memorandum of Points and Authorities in Support of Petition for Writ of Mandate. (Case No. YOSU-CVPT-2019-1724-1)
- Taft, O.W., Colwell, M.A., Isola, C.R., Safran, R.J. (2002). Waterbird responses to experimental drawdown: implications for the multispecies management of wetland mosaics. In *Journal of Applied Ecology* (Vol. 39).

United States Army Corps of Engineers (USACE). 2000. Engineering Manual 1110-2-1913, Engineering and Design—Design and Construction of Levees. [U.S. Army Corps of Engineers: Engineering Manual - Design and Construction of Levees](#)

U.S. Bureau of Reclamation (Reclamation) and California Department of Water Resources (DWR). 2019. Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project Environmental Impact Statement/Environmental Impact Report. June 7, 2019.

U.S. Bureau of Reclamation (Reclamation). 2019. Record of Decision, Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. September 10, 2019.

Weissman, K.G., Strong, D., 2001. Land Use and Economics Study. Grassland Ecological Area, Merced County, California. Prepared for Grassland Water District, Los Banos, CA.