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Since the Record of Decision (ROD) for the programmatic Environmental Impact Statement (EIS) for the revised Land and Resource Management Plan (Forest Plan) for the Wayne National Forest (WNF) was completed (2006), new information about technological advances in oil and gas well development has come to my attention. A team of local resource specialists has reviewed this new information and presented a report to me. Based on this review, I have determined that there is neither the need to supplement the EIS prepared for the Forest Plan revision, nor the need to correct or amend the Forest Plan at this time.

In a letter dated May 3, 2012 (Appendix C of the Supplemental Information Report), the Bureau of Land Management (BLM) provided new information showing that horizontal drilling using high-volume hydraulic fracturing (HVHF) is now economically feasible on the WNF. A possible 13 well sites (10 on the Marietta Unit and 3 on the Athens Unit) could be developed for the remainder of the first 10 years of Forest Plan implementation. In addition to the potential 13 horizontal well sites, the BLM presented information showing that the actual on-the-ground oil and gas activity that has occurred to date is substantially below what was projected by the BLM and subsequently analyzed in the EIS. A total of 234 wells were projected and analyzed with an initial surface disturbance of 272 acres, with 121 acres of sustained disturbance (excess area of disturbance is reclaimed after the well is completed). To date, 12 wells have been developed, with a total of 20 acres of initial surface disturbance, scaled back to 10 acres of sustained disturbance. The BLM also presented a comparison of the scale of activities between conventional vertical and horizontal wells. Pursuant to Forest Service Handbook (FSH) 1909.15, Chapter 18, an interdisciplinary team (IDT) has reviewed the new information in relationship to the Forest Plan, EIS, associated planning documents, laws, rules and regulations. This review is contained in the attached Supplemental Information Report (SIR) and Appendices.

I have read the IDT's report and have determined that the potential effects of developing 13 horizontal well sites using HVHF technologies on the WNF do not present a seriously different picture relative to the effects analysis disclosed in the programmatic EIS and associated planning documents. I have determined that the Forest Service, along with partner agencies involved in oil and gas management, have the ability to provide for the appropriate protection of natural resources and the public if horizontal drilling using HVHF were to take place on the WNF. The Forest Service is only one of many agencies involved in the oversight of oil and gas activities. Furthermore, the Forest Service is primarily responsible for managing surface disturbing activities.

I have determined that there is neither the need to supplement the EIS prepared for the Forest Plan revision, nor the need to correct or amend the Forest Plan at this time. The IDT has shown, and I concur, that possible future horizontal drilling activities can be incorporated into the existing Reasonably



Foreseeable Development Scenario (RFDS) without increasing the projections for acres disturbed over the 10-yr period. Oil and gas activity on-the-ground since the effective date of the Forest Plan has been substantially below the projected/analyzed level (20 acres disturbed, scaled back to 10 acres once excess pad area was reclaimed). Based on the disturbance estimates for horizontal wells provided by the BLM (3-5.5 acres for the development phase and 0.68-1.38 acres of sustained disturbance) and the projected total of horizontal well sites that may occur on the WNF for the remainder of the first 10 years of Forest Plan implementation (13 well sites), initial disturbance for horizontal drilling could be as high as 71.5 acres, scaled back to 17.9 acres of sustained disturbance. These acreages combined with the actual disturbance that has occurred to date are less than one half of the total acres that were analyzed in the programmatic EIS and associated planning documents. This information is displayed in Table 1 below. It is unlikely that, for the foreseeable future, drilling disturbance will exceed the acreage envisioned in the existing analysis. This is important, since the biological documents for the Forest Plan (EIS Appendices F1-F3) considered the effects of oil and gas activities on wildlife and plant resources up to the projected acres.

**Table 1. Display of cumulative acres projected versus acres actually disturbed, showing remaining acres from the RFDS that can be disturbed through the first 10 years of Forest Plan implementation**

	RFDS projection of acres disturbed	Acres disturbed to date	2012 forecast for acres disturbed by horizontal wells	Remainder of acres from RFDS projection
Total initial acres of surface disturbed by oil & gas drilling activity before reclamation	272	20	71.5	180.5
Total acres of surface needed to support drilled wells that are completed for production (excess disturbance reclaimed)	121	10	17.9	93.1

The IDT has also shown, and I concur, that the potential effects of horizontal drilling using HVHF techniques are not seriously different than those analyzed and disclosed in the programmatic EIS and associated planning documents. Measures already existing in the Forest Plan and the EIS, along with the existing laws, rules and regulations allow for the WNF to manage the surface activities such that potential effects are within the range analyzed in the existing Forest Plan EIS. For example, although HVHF operations do require larger quantities of water than conventional drilling methods, because there are not adequate quantities of water found on much of the WNF, the requisite water is not likely to come from sources on or affecting Forest resources. In areas where there is sufficient water supply, WNF would only allow water withdrawals during periods when water was plentiful. Surface occupancy will not be allowed in sensitive areas such as wellhead protection areas or areas of high-yielding aquifers. HVHF operations do create more wastewater; however, it will be required to be contained in a closed system. Producing well sites will need to be reclaimed back to the minimum needed for the production operations in a timely manner. Additional potential effects are discussed in detail in the SIR. Based on the information presented in the SIR, there is neither the need to restrict availability of Federal oil and gas resources, nor the need to propose additional Forest Plan standards or guidelines at this time.

There are currently no proposals to develop horizontal wells using HVHF technology on the WNF. If such a proposal is received, site-specific review will take place at that time. This provides additional opportunities to measure the effect of development against key indicators, such as but not limited to total acreage disturbed. If the combination of horizontal and vertical well activity approaches the analyzed acreage totals (272 acres and 121 acres), or the potential effects of specific well proposals are outside of those predicted in the existing EIS, I will then determine whether to suspend leasing activity, revise the Forest Plan EIS or amend the Forest Plan.



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