

Table S2. Summary of NA-WB-AIV nucleotide sequences used in this study. Only U.S. states and Canadian provinces with more than five sequences (average across different genes, with the exception of North Dakota and South Dakota) are shown in detail, otherwise they are classified as 'Others' and excluded. PF, CF, MF, and AF denote the Pacific flyway, Central flyway, Mississippi flyway, and Atlantic flyway, respectively.

Country	Province/State	Abbrev.	Flyway	PB2	PB1	PA-A	PA-B	NP	MP	NS-A	NS-B	H3	H4	N6	N8
Canada	Alberta	AB	CF	172	162	103	46	183	255	140	78	32	40	40	33
Canada	Quebec	QC	AF	19	19	11	8	19	19	16	3	8	6	5	1
U.S.A.	Alaska	AK	PF	96	101	66	36	93	109	38	72	42	30	25	57
U.S.A.	California	CA	PF	131	129	82	48	123	131	97	36	15	8	12	9
U.S.A.	Delaware	DE	AF	65	80	56	19	66	81	69	4	1	5	7	7
U.S.A.	Louisiana	LA	MF	13	15	4	12	9	13	6	2	4	1	1	5
U.S.A.	Maryland	MD	AF	81	84	56	26	87	86	72	16	9	4	4	6
U.S.A.	Minnesota	MN	MF	246	257	153	102	67	185	54	34	109	73	58	92
U.S.A.	North Dakota	ND	CF	13	13	8	5	0	0	0	0	12	26	0	0
U.S.A.	New Jersey	NJ	AF	140	140	108	37	48	60	42	11	12	26	32	5
U.S.A.	New York	NY	AF	72	78	47	26	69	87	23	53	5	4	1	7
U.S.A.	Ohio	OH	MF	119	120	96	23	127	130	102	30	19	22	20	23
U.S.A.	Oregon	OR	PF	13	13	8	5	11	13	6	6	6	1	2	6
U.S.A.	South Dakota	SD	CF	9	9	3	6	0	0	0	0	2	4	0	1
U.S.A.	Texas	TX	CF	29	35	20	16	10	15	7	6	7	19	15	10
U.S.A.	Washington	WA	PF	47	46	11	36	44	47	31	16	4	12	12	3
	Others			51	45	30	15	46	50	32	19	7	5	5	5
			<i>Total:</i>	<i>1316</i>	<i>1346</i>	<i>862</i>	<i>466</i>	<i>1002</i>	<i>1281</i>	<i>735</i>	<i>386</i>	<i>294</i>	<i>286</i>	<i>239</i>	<i>270</i>
			Alignment length (nt):	2277	2271	2148	2148	1494	982	838	838	1698	1692	1410	1410